<RECORD 1>

Accession number:20182805544486

Title:Sparse adaptive L2LP algorithms with mixture norm constraint for multi-path channel estimation

Authors:Wang, Yanyan (1); Li, Yingsong (1); Yang, Rui (2)

Author affiliation:(1) College of Information and Communications Engineering, Harbin Engineering University, Harbin, Heilongjiang; 150001, China; (2) College of Engineering, Huazhong Agricultural University, Wuhan; 430070, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:An improved sparse l<inf>2</inf>and l<inf>p</inf>norm error criterion algorithm (L2LP) is carried out by incorporating a p-norm like penalty into the cost function of the L2LP algorithm to fully utilize the prior information of the multi-path fading selective channel. The p-norm-like penalty is split into l<inf>0</inf>-and l<inf>1</inf>-norm constraints for large and small channel response coefficients for constructing the l<inf>0</inf>-and l<inf>1</inf>-norm constrained L2LP (L0L1-L2LP) algorithm. Two different zero attractors are exerted on the large and small coefficients, respectively. Furthermore, a reweighting factor is incorporated into the L0L1-L2LP algorithm to construct an enhanced algorithm named as reweighted L0L1-L2LP (RL0L1-L2LP) algorithm. The derivations of both sparse L2LP algorithms are introduced in detail. Numerical simulation samples are set up to discuss the channel estimation performance of our proposed L0L1-L2LP and RL0L1-L2LP algorithms. The obtained results give a confirmation that the proposed L0L1-L2LP and RL0L1-L2LP algorithms outperform the L2LP and the related L2LP algorithms in light of the convergence and steady-state performance for handling sparse channel estimation.<br/> &copy; 2017 IEEE.

Number of references:25

Main heading:Channel estimation

Controlled terms:Computer networks - Cost functions - Multipath fading

Uncontrolled terms:Enhanced algorithms - Error criterion - Estimation performance - Prior information - Selective channels - Sparse channel estimations - Steady state performance - Zero attractors

Classification code:711.2 Electromagnetic Waves in Relation to Various Structures - 921.5 Optimization Techniques

DOI:10.1109/ICCSNT.2017.8343747

Database:Compendex

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<RECORD 2>

Accession number:20182805544265

Title:Application of modified partial least squares in data analysis of Traditional Chinese Medicine

Authors:Xiong, Wangping (1); Du, Jianqiang (1); Nie, Bin (1); Huang, Liping (1); Zhou, Xian (1)

Author affiliation:(1) School of Computer, Jiang Xi University of Traditional Chinese Medicine, NanChang, JiangXi, China

Corresponding author:Du, Jianqiang

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Because of the complexities of traditional Chinese medicine's prescriptions, the dose-effect relationship between prescriptions has a significant difference from the common 'S'-type curve of the pharmaceutical chemicals, which is nonlinear. Therefore, the study of the dose-effect relationship between prescriptions can not copy the research methods of dose-effect relationship of pharmaceutical chemicals, but need to consider a variety of influencing factors and compatibility of medicines. Based on the collection, collation and analysis of experimental data in a large number of literature of Traditional Chinese Medicine(TCM) prescriptions, this paper first planned to construct algorithm which fused Q-Type clustering and R-Type clustering to eliminate abnormal data; obtain high-efficiency modeling samples through the correction method of orthogonal signal; build a complete path graph by making the respective variables and dependent variables as nodes and using direct and indirect path coefficient as weights, and analyze the directional and authoritative graph through the complex network model to filter the important variables out; The partial least squares (PLS) nonlinear model towards the dose-effect relationship of TCM was established based on the maximum entropy principle to determine the partial least squares, which has great significance to scientifically illustrate the dose-effect relationship between prescriptions and its effects, systematically study, summarize and draw theories of prescriptions' doses, rationally improve the clinical effects of TCM and guide the choices of clinical doses.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Least squares approximations

Controlled terms:Cluster analysis - Complex networks - Electric network analysis - Industrial chemicals - Maximum entropy methods - Medicine

Uncontrolled terms:Dose effects - Dose-effect relationships - Least Square - Maximum entropy principle - Modified partial least squares - Orthogonal signal correction - Partial least square (PLS) - Traditional Chinese Medicine

Classification code:461.6 Medicine and Pharmacology - 703.1.1 Electric Network Analysis - 716.1 Information Theory and Signal Processing - 722 Computer Systems and Equipment - 723 Computer Software, Data Handling and Applications - 803 Chemical Agents and Basic Industrial Chemicals - 804 Chemical Products Generally - 921.6 Numerical Methods

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Database:Compendex

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<RECORD 3>

Accession number:20182805543617

Title:Analysis of TV audience flow based on the lingered channel matrix

Authors:Yin, Fulian (1); Bai, Xuesong (1); Chai, Jianping (1); Zhang, Wenwen (2)

Author affiliation:(1) Communication University of China, College of Information Engineering, Beijing; 100024, China; (2) Beijing Aerospace System Engineering Institute, Beijing; 100076, China

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:At present, the analysis of television ratings gives priority to ordinary sectional analysis which is represented by audience ratings, market share and other indices, and has little analysis of the audience flowing. Additionally, traditional research method of audience flowing has some problems such as high time cost, large storage space, weak reusability and no analysis about overall flow trend or audience clustering. This paper proposes a new scheme on the analysis of audience flowing. It is based on the established lingered channel matrix produced by raw viewing data. From the angle of channels (or programs) and users, this paper adopts the conventional mathematical statistics method and clustering algorithm to reflect audience flowing between different channels and their own viewing behavior in detail. The lingered channel matrix established by the scheme clearly shows the channel that audience linger at every moment, leaving the original viewing data away and avoiding the problem of high cost of time and storage space by repeatedly reading and processing raw data. Moreover, the matrix provides the data base for the subsequent extension research, in order to realize the analysis of TV audience flowing in a deeply vertical level.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Clustering algorithms

Controlled terms:Competition - Computer networks - Cost benefit analysis - Data handling - Digital storage - Matrix algebra - Reusability - Statistics

Uncontrolled terms:Audience flowing - Channel matrices - High costs - Market share - Mathematical statistics methods - research methods - Sectional analysis - Storage spaces

Classification code:722.1 Data Storage, Equipment and Techniques - 723.2 Data Processing and Image Processing - 903.1 Information Sources and Analysis - 911 Cost and Value Engineering; Industrial Economics - 911.2 Industrial Economics - 921.1 Algebra - 922.2 Mathematical Statistics

DOI:10.1109/ICCSNT.2017.8343684

Database:Compendex

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<RECORD 4>

Accession number:20182905548824

Title:Design and research of wind farm monitoring and information management system based web and distribute process technology

Authors:Sun, Lihua (1); Bian, Xiaodong (1); Kong, Zhen (1); Deng, Chun (2); Hu, Mu (1); Luo, Liming (1); Meng, Qingqiang (1)

Author affiliation:(1) Nanjing NARI Group Corporation, Nanjing, China; (2) State Grid JiBei Electric Power Company, Beijing, China

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The current supervisory control and data acquisition(SCADA) system of wind farm has the problem of poor flexibility and weak integration in data access and the integrity of the data is susceptible to network and environmental factors. To solve the problem, I designed and researched SCADA system and wind farm data structure of wind farm and proposed a set of Web-based wind farm monitoring and information management system solution. I have introduced the key technologies of the system hardware and software basic architecture, fan data model establishment, data disconnection, distributed computing, multimedia access and so on. Through the system in a wind farm field deployment and operation, the various functions of the system were tested. The results show that the system has the ability to access different models of fans and external equipment data, the continuity and integrity of the data have been greatly protected, and the integrated management has effectively improved the operation and management efficiency of the wind field. The successful development and application of the system has a positive reference value for the further development of wind farm monitoring and management technology.<br/> &copy; 2017 IEEE.

Number of references:13

Main heading:Information management

Controlled terms:Computer networks - Distributed computer systems - Electric utilities - Monitoring - SCADA systems - Websites - Wind power

Uncontrolled terms:Development and applications - Information management systems - Integrated management - Monitoring and management - Operation and management - Supervisory Control and Data Acquisition (SCADA) systems - Web based - Wind farm

Classification code:615.8 Wind Power (Before 1993, use code 611 ) - 722.4 Digital Computers and Systems - 731.1 Control Systems

DOI:10.1109/ICCSNT.2017.8343669

Database:Compendex

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<RECORD 5>

Accession number:20182805544608

Title:Adaptively group based on the first joint sparsity models distributed compressive sensing of hyperspectral image

Authors:Deng, Linuan (1); Zheng, Yuefeng (1); Jia, Ping (1); Lu, Sichen (1); Yang, Jiuting (1)

Author affiliation:(1) College of Bardon Jilin Normal University, Department of Computer and Information Science, Siping; 136523, China

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Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Hyperspectral Images (HSI) have strong spectral correlation compared with ordinary 2D images. Distributed compressed sensing (DCS) happens to exploit both intra-and inter-signal correlation structures among multiple nodes and lends itself well to hyperspectral image compression. In this paper, we propose a new algorithm of adaptive grouping for HSI compression based on the first joint sparsity model (JSM-1) of DCS. This algorithm adaptively divides one hyperspectral image into several groups of bands (GOBs) in accordance with its spectral correlation firstly, to ensure that each group of bands has strong spectral correlation. Every group of bands contains a reference band and the remaining non-reference bands, and then subtracts the reference band from each of the non-reference bands in the same group which makes the structure conform JSM-1. Then the distributed compressed sensing JSM-1 model is applied to hyperspectral image compression, encoding every residual image using CS coding. We use a joint recovery algorithm to reconstruct at the decoder. In this algorithm, the spectral similarity of high spectral images is used to get the data more sparse and improve the reconstruction effect of the compressed image, and the better compression efficiency is obtained. Experiments show the feasibility of the proposed algorithm.<br/> &copy; 2017 IEEE.

Number of references:32

Main heading:Image compression

Controlled terms:Compressed sensing - Computer networks - Hyperspectral imaging - Image coding - Image enhancement - Independent component analysis - Spectroscopy

Uncontrolled terms:Adaptively grouping - Compression efficiency - Compressive sensing - Distributed Compressed Sensing - Joint sparsity models - Recovery algorithms - Spectral correlation - Spectral similarity

Classification code:716.1 Information Theory and Signal Processing

DOI:10.1109/ICCSNT.2017.8343733

Database:Compendex

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<RECORD 6>

Accession number:20182805544482

Title:Global consensus making on multiplex scale-free networks

Authors:Nguyen, Vu Xuan (1); Xiao, Gaoxi (1, 2)

Author affiliation:(1) School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore; 639798, Singapore; (2) Complexity Institute, Nanyang Technological University, 18 Nanyang Drive, Singapo; 637723, Singapore

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Most individuals, if not all, are active in various social networks. Opinion formation is an outcome of social interactions and information propagation occurring in such social systems. In this paper, we study on opinion formation on multiplex networks composed of two layers, each of which is a scale-free network, with a special focus on global consensus making in such networks. We impose a new rule of pair-wise interactions under inter-layer interplay termed as compromise following which two interacting nodes have a tendency to make a fair compromise in both senses of inter-and intra-layer interplay. It is found that in a duplex network composed of two identical layers, an increase in tolerance range in a layer declines the opinion diversity on the other layer and the two critical confidence bounds for achieving global consensus in both layers follow a one-sum rule; that is, each of the layers reaches a global consensus if the sum of two critical bounds on the two layers is approximately equal to 1, a double of critical bound on a single-layer network. However, in duplex networks of two non-identical layers with layer-layer coupling quantified by a link overlap parameter, the rule does not hold any longer. In this case, due to the larger portion of low-degree nodes in typical scale-free networks, a layer only can reach a complete consensus if its associated tolerance range is as large as nearly 0.5 even when the tolerance range on the other layer is utmost.<br/> &copy; 2017 IEEE.

Number of references:33

Main heading:Network layers

Controlled terms:Complex networks - Information dissemination

Uncontrolled terms:Confidence bounds - Information propagation - Interacting nodes - Multiplex networks - Opinion dynamics - Opinion formation - Pairwise interaction - Social interactions

Classification code:722 Computer Systems and Equipment - 723 Computer Software, Data Handling and Applications - 903.2 Information Dissemination

DOI:10.1109/ICCSNT.2017.8343716

Database:Compendex

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<RECORD 7>

Accession number:20182805544622

Title:Vehicle sticker recognition based on multi-feature encoding and feature matrix distance

Authors:Ding, Zuchun (1); Mo, Wenying (1)

Author affiliation:(1) Guangzhou University, Guangdong, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

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Language:English

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:A novel algorithm to use vehicle sticker (or tag) features and encode the features is proposed. It can make the representation more precise and recognition more accurate. In vehicle recognition or searching, traditional algorithms will be limited because they focus only on the features extracted from colors, logos or sub-types that are not enough to identify a vehicle. Furthermore, the license plate (LP) can be forged easily so the LP is not reliable to identify a specified vehicle. Our algorithm solves this problem by sticker multi-feature encoding. Most vehicles have printed permission labels or certification symbols named vehicle stickers or tags mounted on the frontal glass. These stickers are a kind of special fingerprint features to identify a unique vehicle. Every driver has his own habit to paste different stickers. In this meaning these stickers form specified multi-feature including color, shape, position and amount. Our algorithm encodes the sticker multi-feature to construct structured feature presentation, i.e. the sticker code. In recognition stage, with the matrix distance of the multi-feature encoding, the detailed sticker code can be utilized to distinguish the vehicle types and colors reliably, and can recognize the tiny difference among vehicles with the same colors, logos and even sub-types. Our algorithm decreases the amount of vehicle candidates effectively by accurate feature coding. In our experiments, we coped with 10000 vehicle images taken by public traffic surveillance system to verify the effectiveness of this algorithm in vehicle sticker multi-feature encoding recognition.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:License plates (automobile)

Controlled terms:Color - Computer networks - Encoding (symbols) - Image coding - Signal encoding

Uncontrolled terms:Feature matrices - Fingerprint features - Matrix distances - Multi features - recognition - stickers - Traffic surveillance - Vehicle recognition

Classification code:662.1 Automobiles - 716.1 Information Theory and Signal Processing - 723.2 Data Processing and Image Processing - 741.1 Light/Optics

DOI:10.1109/ICCSNT.2017.8343736

Database:Compendex

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<RECORD 8>

Accession number:20182805544144

Title:Frequency offset estimation algorithm of spread spectrum coherent heterodyne based on ISFT

Authors:Sun, Cancan (1); Zhou, Ronghua (1); Han, Hangcheng (1); Bu, Xiangyuan (1)

Author affiliation:(1) School of Information and Electronics, Beijing Institute of Technology, Beijing, China

Corresponding author:Sun, Cancan(suncancan@bit.edu.cn)

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Satellite to ground laser uplink is seriously affected by atmospheric environment, resulting in greater power attenuation than downlink. Uplink is used to transmit low speed instructions and control signals. In order to improve the sensitivity of satellite to ground uplink, and reduce the influence of large frequency offset on receiver, coherent heterodyne detection and spread spectrum technique are applied to uplink. To cut down the consumption of resources on the satellite, the inverse sparse Fourier transform (ISFT) is used to reduce the computational complexity of the frequency offset estimation algorithm. The frequency offset estimation algorithm based on ISFT is theoretically analyzed and validated by simulation. The simulation results reveal that compared with the direct detection of 16PPM, the sensitivity of spread spectrum coherent heterodyne detection is improved by 16dB when the error rate is 10<sup>-8</sup>. In the high signal-to-noise ratio environment at satellite to ground uplink, ISFT can estimate the frequency offset as accurate as IFFT while saving computational complexity.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Frequency estimation

Controlled terms:Complex networks - Computational complexity - Frequency allocation - Heterodyne detection - Heterodyning - Satellites - Signal to noise ratio - Spectroscopy

Uncontrolled terms:Atmospheric environment - Direct detection - Frequency offset estimation - Frequency offsets - High signal-to-noise ratio - Power attenuation - Spread spectra - Spread spectrum techniques

Classification code:655.2 Satellites - 716 Telecommunication; Radar, Radio and Television - 721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 722 Computer Systems and Equipment

Numerical data indexing:Decibel 1.60e+01dB

DOI:10.1109/ICCSNT.2017.8343713

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<RECORD 9>

Accession number:20182805544658

Title:Research on DICOM file compression and offline storage platform

Authors:Xiong, Wangping (1); Du, Jianqiang (1); Nie, Bin (1); Huang, Liping (1); Zhou, Xian (1)

Author affiliation:(1) School of Computer, Jiang Xi University of Traditional Chinese Medicine, NanChang, JiangXi, China

Corresponding author:Xiong, Wangping(xiaoxiongxwp@126.com)

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Digital Imaging and Communications in Medicine (DICOM) is an industry standard for the delivery of medical images and their information across a variety of devices, which standardizes the format of various medical images and supports both TCP / IP protocols. With the rapid development and popularization of network technology, it is required to communicate with PACS system through medical image browser and display PACS image and related information in medical image browser, so as to realize fast access of DICOM permanent object. This paper focuses on the main content and structure, which is related to DCM4CHEE system, by using PACS system based on message and service-oriented open source, such as DCM4CHEE, for the medical image browser and the server-side interaction. In this paper, DCM4CHEE system uses MYSQL as DICOM database and uses JBOSS as an application server to build a PACS system experiment. According to the basic needs of users and functional requirements, the system is divided into various functional modules, the design of its commonly used sub-system functions, the design of the basic functions of the system, according to the actual needs of research and study to make the overall design of the image file be browsed. The paper chooses Java as the development platform, carries on the inquiry into the image document and carries on the design and realization of it. The system has a good interactive interface, which can greatly enhance the users' experience.<br/> &copy; 2017 IEEE.

Number of references:12

Main heading:Medical information systems

Controlled terms:Computer aided diagnosis - Computer networks - Database systems - Digital devices - Digital Imaging and Communications in Medicine (DICOM) - Medical imaging - Open source software - Open systems - Picture archiving and communication systems

Uncontrolled terms:Application Servers - Content and structure - DCM4CHEE - Development platform - Functional requirement - Interactive interfaces - Network technologies - Users' experiences

Classification code:723 Computer Software, Data Handling and Applications - 746 Imaging Techniques - 902.2 Codes and Standards - 903 Information Science

DOI:10.1109/ICCSNT.2017.8343753

Funding Details: Number; Acronym; Sponsor: 30860350; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61363042; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61562045; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61762051; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 10>

Accession number:20182805544366

Title:A modified real time dynamic spectrum adjustment scheme in FM IBOC broadcasting

Authors:Hu, Fangfei (1); Cai, Chaoshi (1); Hu, Feng (1); Zhuang, Yanqiong (1)

Author affiliation:(1) School of Information Engineering Communication, University of China, Country Beijing, China

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:How to improve the quality of transmission and increase the speed of digital signal transmission is the inevitable trend of the research of digital broadcasting. IBOC (In-Band On-Channel) is the best choice of analog broadcasting to digital analog broadcasting simultaneously and to digital broadcasting. The real time dynamic spectrum adjustment technology is introduced into the IBOC broadcasting in this paper, the scheme is based on the dynamic spectrum IBOC scheme. Just according to the current frame and the existing audio quality, with the method of statistical analysis, the digital bandwidth of the current frame is adjusted by improving NMRref reference table, which can be adopted to solve the problem of time-varying interference between digital and analog signal. This algorithm uses the objective evaluation index based on perceptual evaluation of audio quality as the evaluation standard of audio quality and proposes an evaluation system suitable for this IBOC system project, which takes the time-varying noise and the subjective feelings into consideration. Finally, the ability of digital signal transmission will be enhanced, so as to realize real-time dynamic spectrum adjustment in real sense.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Quality control

Controlled terms:Acoustic noise - Audio acoustics - Audition - Computer networks - Digital radio - Digital television - Frequency modulation - Indium compounds - Radio broadcasting - Sound reproduction

Uncontrolled terms:Digital Broadcasting - Digital signal transmission - In-band - Objective evaluation - Perceptual evaluation of audio qualities - Quality of Transmission - Real-time dynamics - Time varying

Classification code:461.4 Ergonomics and Human Factors Engineering - 716.3 Radio Systems and Equipment - 716.4 Television Systems and Equipment - 751.1 Acoustic Waves - 751.4 Acoustic Noise - 752.3 Sound Reproduction - 913.3 Quality Assurance and Control

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Database:Compendex

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<RECORD 11>

Accession number:20182805543980

Title:Research on the application and development trend of cloud computing based on E-commerce

Authors:Shi, Lei (1); Wang, Wenyong (2); Wang, Jinghui (1); Yi, Su (3)

Author affiliation:(1) Teaching and Research Section of Information Management, Information and Technology College, Jilin Agricultural University, Changchun, China; (2) School of Software, Northeast Normal University, Changchun, China; (3) Fuxin Animal Disease Prevention and Control Center, Fuxin, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Publication year:2018

Pages:339-342

Language:English

ISBN-13:9781538604922

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Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:With the developing of computer and electronic technology, the technology of cloud computing and e-commerce theory has been booming, research and technology emerge in an endless stream of all aspects, to provide theoretical support and technical support for the research of electronic commerce based on cloud computing. This paper introduces the related theories of cloud computing and e-commerce, the application and application of cloud computing based e-commerce, the characteristics, open question, how to solve problems and trends.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Computation theory

Controlled terms:Cloud computing - Computer hardware description languages - Computer networks - Electronic commerce

Uncontrolled terms:Computer technology - Development trends - Electronic technologies - Technical support

Classification code:721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 722.4 Digital Computers and Systems - 723.1.1 Computer Programming Languages - 723.5 Computer Applications

DOI:10.1109/ICCSNT.2017.8343714

Database:Compendex

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<RECORD 12>

Accession number:20182805544654

Title:An efficient implementation of FFT based on CGRA

Authors:Jinhe, Wei (1); Jinjiang, Yang (2); Hui, Li (3); Youyu, Wu (4)

Author affiliation:(1) SoC RandD Center, Zhongkexin Integrated Circuit Co. Ltd., Wuxi; 214000, China; (2) National ASIC System Engineering Technology Research Center, Southeast University, Nanjing; 210096, China; (3) Institute of Microelectronics, Tsinghua University, Beijing; 100084, China; (4) Wuxi Research Institute of Applied Technologies, Tsinghua University, Wuxi; 214000, China

Corresponding author:Jinjiang, Yang(yangjinjiang@seu.edu.cn)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Language:English

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Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:This paper presents an efficient implementation of complex FFT algorithm on REMUS-II-MB, which is a CGRA-based reconfigurable architecture. The implementation is divided into two steps. The local sequential stages are performed on the RCAs independently at the first step and the cross parallel stages with data communications are processed at the second stage. The performance of this work is improved by employing two technologies, namely pipeline bubble elimination and data block location rearrangement. Compared with other parallel FFT implementations, the proposed one on REMUS-II-MB has the performance advantage by 1.15 to 12.6 times with little local memory cost.<br/> &copy; 2017 IEEE.

Number of references:15

Main heading:Reconfigurable architectures

Controlled terms:Computer networks - Fast Fourier transforms

Uncontrolled terms:CGRA - Data blocks - Data-communication - Efficient implementation - FFT algorithm - Local memory - Reconfigurable computing

Classification code:722 Computer Systems and Equipment - 921.3 Mathematical Transformations

DOI:10.1109/ICCSNT.2017.8343746

Database:Compendex

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<RECORD 13>

Accession number:20182805543938

Title:Research on the recommendation of mobile phone tariff package based on time series analysis

Authors:Gao, Xiaodan (1); Cao, Zhiying (1); Zhang, Xiuguo (1)

Author affiliation:(1) Information Science and Technology Department, Dalian Maritime University, Dalian, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

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Language:English

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Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:With communication developing, the choice of tariff packages has become a topic that everyone concerns today. In this article, by adding an error correction factor to the &Aring;str&ouml;m forecast method, an improved model is proposed to predict the future consumption data for each cell phone user and help them to choose the appropriate package. Simulation experiments done on large number of real data manifest that the improved method can reduce the prediction error to a certain extent and improve the accuracy of multi-step prediction compared with &Auml;str&ouml;m method, and can recommend more appropriate tariff packages for mobile phone users.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Time series analysis

Controlled terms:Cellular telephones - Computer networks - Error correction - Forecasting - Harmonic analysis - Mobile phones - Mobile telecommunication systems - Telephone sets

Uncontrolled terms:ARIMA - Correction factors - Forecast method - Future consumption - Mobile-phone users - Multi-step prediction - Prediction errors - Tariff packages

Classification code:718.1 Telephone Systems and Equipment - 921.6 Numerical Methods - 922.2 Mathematical Statistics

DOI:10.1109/ICCSNT.2017.8343689

Funding Details: Number; Acronym; Sponsor: 51179020; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61272172; NSFC; National Natural Science Foundation of China

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 14>

Accession number:20182805544790

Title:Eigenvector label propagation algorithm for interactive learning in student groups based on student social network

Authors:Wang, Zhiping (1)

Author affiliation:(1) Shanghai Jiao Tong University, Shanghai, China

Corresponding author:Wang, Zhiping(movingday@sjtu.edu.cn)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

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Language:English

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Interactive learning, which is based on data mining, is a hot issue and has attracted considerable attention recently. in this paper, we propose an Eigenvector Label Propagation Algorithm (ELPA), which is improved from Label Propagation Algorithm and solves three problems existing in original algorithm. The efficiency is improved greatly because of the introducing of 2-bit eigenvector label, which can reduce the size of exchanging data significantly. We compare the ELPA with GN and BMLPA on two famous benchmarks, and the experimental results show that the groups detected by ELPA are almost identical to the communities discovered by other LPA algorithms.<br/> &copy; 2017 IEEE.

Number of references:9

Main heading:Learning algorithms

Controlled terms:Computer networks - Data mining - E-learning - Educational technology - Eigenvalues and eigenfunctions - Learning systems - Social networking (online)

Uncontrolled terms:Community detection - Interactive learning - Label propagation - Original algorithms - Student groups

Classification code:723 Computer Software, Data Handling and Applications - 723.2 Data Processing and Image Processing - 901.2 Education

DOI:10.1109/ICCSNT.2017.8343696

Database:Compendex

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<RECORD 15>

Accession number:20182805544270

Title:Application research of energy data acquisition and analysis based on real-Time stream processing platform

Authors:Li, Kunming (1); Ji, Cong (1); Zhong, Chunlin (1); Zheng, Fei (1); Shao, Jun (1)

Author affiliation:(1) Smart Grid Product Center, Jiangsu Frontier Electric Technology CO. LTD, Nanjing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In the context of national energy-saving emission reduction strategy, the user energy efficiency has become a hot topic in academia and the business community. In order to solve the problems of large amount of data and fast changing speed in real-Time transmission terminal equipment, it has strict requirement for processing timeliness. We need to introduce distributed real-Time data, high-speed synchronization, acquisition and processing and analysis technology to build a real-Time flow processing platform. Real-Time stream processing platform uses message queue (Kafka) to receive data from different real-Time sources, and the back-end uses stream processing technology (Storm) to analyze real-Time data.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Energy efficiency

Controlled terms:Computer networks - Data acquisition - Data communication equipment - Emission control - Energy conservation - Storms

Uncontrolled terms:Application research - Business community - Energy saving and emission reductions - Energy-saving emission reductions - Kafka - Real-time streams - Real-time transmissions - Terminal equipment

Classification code:443.3 Precipitation - 451.2 Air Pollution Control - 525.2 Energy Conservation - 723.2 Data Processing and Image Processing

DOI:10.1109/ICCSNT.2017.8343681

Database:Compendex

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<RECORD 16>

Accession number:20182805544474

Title:Image enhancement method based on wavelet and adaptive fractional differential

Authors:Wang, Yizheng (1); Liu, Li (1)

Author affiliation:(1) School of Information Science and Engineering, Lanzhou University Lanzhou, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:To acquire images with abundant detail features and obvious differences among weak details, an improved image enhancement method based on wavelet and adaptive fractional differential is proposed in this paper. According to differential box-counting method, the fractal dimension and the differential order can be obtained. Afterwards the fractional filter templates of removing the horizontal direction, removing the vertical direction and removing the diagonal direction are designed. For the sake of extracting more image edge information, the wavelet coefficients of time-frequency decomposition are processed by the corresponding templates, and the processed wavelet coefficients will be reconstructed and linearly superimposed to obtain the enhanced images and the edge images. The experimental results show that this improved method can preserve the low-frequency information of the image non-linearly. The ability to enhance and extract the high-frequency edge information is superior to that of Tiansi algorithm and other improved algorithms referred in this paper. The method can also determine the ideal differential order adaptively, thereby achieving the optimal enhancement effects.<br/> &copy; 2017 IEEE.

Number of references:18

Main heading:Image enhancement

Controlled terms:Computer networks - Fractal dimension - Wavelet decomposition - Wavelet transforms

Uncontrolled terms:Box-counting - Box-counting method - Enhancement effects - Fractional differential - Fractional filters - Time-frequency decomposition - Vertical direction - Wavelet coefficients

Classification code:921 Mathematics - 921.3 Mathematical Transformations

DOI:10.1109/ICCSNT.2017.8343741

Funding Details: Number; Acronym; Sponsor: 61602225; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 17>

Accession number:20182805544177

Title:The application of hybrid Particle Swarm Optimization in job shop scheduling problem

Authors:Huang, Ming (1); Yang, Wenju (1); Liang, Xu (1)

Author affiliation:(1) Software Institute, Dalian Jiaotong University, Dalian; 116028, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

ISBN-13:9781538604922

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Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The background of this paper is pursuing the shortest total processing time of job shop scheduling problem. The research is inspired by the Migrating Bird Optimization (MBO) algorithm. In order to improve the local search capability, the Particle Swarm Optimization (PSO) algorithm is combined with the MBO algorithm to optimize the efficiency of the PSO algorithm. MBO algorithm is a new Neighborhood Search algorithm, which simulates the V formation in birds during migration, and optimizes the algorithm by reducing energy consumption. The algorithm starts with a certain number of parallel solutions, so individuals in the population can not only find the better solution from their own neighborhood, but also find the better solution from the previous individual neighborhood, which makes it quick to find the optimal solution. In this paper, we add the MBO algorithm in the PSO algorithm to update the individual and global extremes of the particles by increasing the information of other particles in the neighborhood of the common particle, adjusting the flight state to achieve a larger search range and global finest solution. Compared with the PSO algorithm in the literature [9], the convergence of this algorithm is more obvious, the number of trapped in local optimal solution is decreased significantly. Paper is divided into four parts, the first is the introduction, the second one introduces the mathematical model of job shop scheduling, the third part mixes the MBO algorithm with the PSO algorithm, and the last is the experimental analysis of the algorithm.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Job shop scheduling

Controlled terms:Birds - Computer networks - Energy utilization - Optimal systems - Particle swarm optimization (PSO) - Scheduling

Uncontrolled terms:Hybrid Particle Swarm Optimization - Job shop scheduling problems - Local optimal solution - Migrating birds - Neighborhood search algorithms - Particle swarm optimization algorithm - Reducing energy consumption - Total processing time

Classification code:525.3 Energy Utilization - 912.2 Management - 921.5 Optimization Techniques - 961 Systems Science

DOI:10.1109/ICCSNT.2017.8343703

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 18>

Accession number:20182805543647

Title:An object detection system based on YOLO in traffic scene

Authors:Tao, Jing (1); Wang, Hongbo (1); Zhang, Xinyu (1); Li, Xiaoyu (1); Yang, Huawei (1)

Author affiliation:(1) State Key Lab. of Networking and Switching Technology, Beijing University of Posts and Telecommunications, Beijing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

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Part number:1 of 1

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Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:We build an object detection system for images in traffic scene. It is fast, accurate and robust. Traditional object detectors first generate proposals. After that the features are extracted. Then a classifier on these proposals is executed. But the speed is slow and the accuracy is not satisfying. YOLO an excellent object detection approach based on deep learning presents a single convolutional neural network for location and classification. All the fully-connected layers of YOLO's network are replaced with an average pool layer for the purpose of reproducing a new network. The loss function is optimized after the proportion of bounding coordinates error is increased. A new object detection method, OYOLO (Optimized YOLO), is produced, which is 1.18 times faster than YOLO, while outperforming other region-based approaches like R-CNN in accuracy. To improve accuracy further, we add the combination of OYOLO and R-FCN to our system. For challenging images in nights, pre-processing is presented using the histogram equalization approach. We have got more than 6% improvement in mAP on our testing set.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Object detection

Controlled terms:Computer networks - Computer vision - Convolution - Deep learning - E-learning - Neural networks - Object recognition

Uncontrolled terms:Convolutional neural network - Detection approach - Fully-connected layers - Histogram equalizations - Object detection method - Object detection systems - Object detectors - Region based approach

Classification code:716.1 Information Theory and Signal Processing - 723.2 Data Processing and Image Processing - 723.5 Computer Applications

Numerical data indexing:Percentage 6.00e+00%

DOI:10.1109/ICCSNT.2017.8343709

Funding Details: Number; Acronym; Sponsor: 61002011; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 19>

Accession number:20182905547013

Title:A task scheduling simulation for phased array radar with time windows

Authors:Qiang, Song Wei (1); Xing, Han (1); Jian, Gao (1)

Author affiliation:(1) Dept. xi'An Electronic Engineering Research Institute, Xi'an; 710100, China

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:This paper presents the radar task scheduling problem for a prior way which will ignore the issues of the urgency and importance of task time. For this problem, we present a method based on the three characteristic parameters: The task priority, deadline and idle time, composed of an algorithm which accommodates the different load conditions of the radar scheduler by adjusting the parameter weight and composed of a way with time window which makes sure that more high priority tasks can be scheduled in a scheduling interval.<br/> &copy; 2017 IEEE.

Number of references:9

Main heading:Scheduling

Controlled terms:Computer networks - Multitasking - Radar - Scheduling algorithms

Uncontrolled terms:Load condition - Phased array radars - Priority tasks - Radar tasks - Scheduling interval - Task priorities - Task-scheduling - Time windows

Classification code:716.2 Radar Systems and Equipment - 722.4 Digital Computers and Systems - 912.2 Management

DOI:10.1109/ICCSNT.2017.8343679

Database:Compendex

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<RECORD 20>

Accession number:20182905548818

Title:The cooperation stability evaluation between Chinese and overseas Chinese and going-out enterprises based on Fuzzy Synthetic Evaluation Model

Authors:Liang, Yu-Xin (1); Wang, Qun (1); Li, Hui (1)

Author affiliation:(1) Business School, Hohai University, Jiangsu Prov. Collab. Innovation Center of World Water Valley and Water Ecological Civilization, Nanjing, China

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Under the background of 'One belt, one road' policy in China, the rapid development of going-out enterprises has drawn people's more and more attention. Using existing cooperative theory evaluation indexes, this paper creates a Cooperation Stability Evaluation model among Chinese, overseas Chinese and going-out enterprises based on Fuzzy Synthetic Evaluation Model. By applying the theory to the practice, the paper carries out a simulation analysis and finds out the shortages, which could offer guides to enterprises' future development.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Fuzzy set theory

Controlled terms:Computer networks - Convergence of numerical methods

Uncontrolled terms:Chinese and overseas Chinese - Evaluation index - Fuzzy synthetic evaluation models - Going outs - Simulation analysis - Stability evaluation

Classification code:921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory - 921.6 Numerical Methods

DOI:10.1109/ICCSNT.2017.8343665

Database:Compendex

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<RECORD 21>

Accession number:20182905546908

Title:Big data analysis for SCIE research output of Chinese computer science

Authors:Yang, Li (1); Zhou, Jing (1); Shi, Jun (1); Li, Yueyang (1)

Author affiliation:(1) School of Arts and Communications, Anhui University, Hefei; 230011, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:This paper focuses on SCIE research output of computer science from China and its international effect. Choosing the SCI network edition database from 2007 to 2016 as statistical source, SCIE research output issued by Chinese author of computer science is inspected. Having been cleaning and carding data, some key elements of SCIE articles of computer science are analyzed. The paper also draws the outline of general position based on SCIE computer science output from quantitative to qualitative scientific practice, and the development level of computer science is inferred and its future development trend is predicted.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Computer networks

Controlled terms:Big data - Computer science - Textile industry

Uncontrolled terms:China - Development trends - Key elements - Research outputs - SCI expanded - Statistical sources

Classification code:723.2 Data Processing and Image Processing - 819.6 Textile Mills, Machinery and Equipment

DOI:10.1109/ICCSNT.2017.8343699

Database:Compendex

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<RECORD 22>

Accession number:20182905546810

Title:Research on the design of international student management system

Authors:Zhang, Wenyu (1)

Author affiliation:(1) International College, North China University of Technology, Beijing, China

Corresponding author:Zhang, Wenyu(zhangwenyu@ncut.edu.cn)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:With the increase in the number of international students, the quality of management of international students needs to be improved. So that the management system for international students was developed. We use the information technology to improve management efforts. In this paper, the demand and design process of the students' management system are described. First, the demand for international students is analyzed, the demand acquisition is carried out, the various functional requirements of the student management system is identified, and the function modules are designed in detail by using the classification chart and timing diagram, finally System achieves five functions, including the school management, educational administration, daily management, communication and system management.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:E-learning

Controlled terms:Computer networks - Design - Students - Systems analysis

Uncontrolled terms:Functional requirement - International students - J2EE - Management efforts - Management systems - MYSQL - Student management - System management

Classification code:961 Systems Science

DOI:10.1109/ICCSNT.2017.8343675

Database:Compendex

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<RECORD 23>

Accession number:20182905548835

Title:IoT device management architecture based on proxy

Authors:Jin, Wenquan (1); Kim, Do-Hyeun (1)

Author affiliation:(1) Department of Computer Engineering, Jeju National University, Jeju, Korea, Republic of

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

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Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Internet of Things (IoT) requires seamless integration of heterogeneous devices and applications. Various communication technologies, protocols, data format and network solutions are used for connectivity of things in IoT. Interoperability is the most essential feature desired in data format and communication protocols to support IoT vision of connected world. However, due to the heterogeneity of elements in the IoT, management of IoT devices and others would be complex. Moreover, the data format and communication protocols are also important in the data transmission between devices and applications. This paper proposes an integrated IoT system to facilitate management of diverse resources in IoT environment. Proposed architecture is comprised of the IoT service provider, the interworking proxy and the IoT device.<br/> &copy; 2017 IEEE.

Number of references:17

Main heading:Internet of things

Controlled terms:Network architecture

Uncontrolled terms:Device - Discovery - Interworking - Management systems - Registration

Classification code:723 Computer Software, Data Handling and Applications

DOI:10.1109/ICCSNT.2017.8343663

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 24>

Accession number:20182905548902

Title:Optimal design and applied research of a trailing suction hopper dredger loading system

Authors:Li, Wei (2); Su, Zhen (1); Hong, Guojun (2)

Author affiliation:(1) CCCC National Engineering, Research Center of Dredging, Technology and Equipment, Shanghai, China; (2) Jiangsu University of Science and Technology, Zhenjiang, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

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Language:English

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In view of the nonlinear characteristics of dynamic model of dredging process, this paper adopts intelligent control algorithm such as pattern search and genetic algorithm to solve optimal control parameters, and obtains the optimal control strategy of dredging efficiency. Based on the combined application of database technology, LabVIEW, network communication and modern control technology, the optimization system of suction hopper dredger loading hopper is constructed. The system can be displayed to operators by man-machine interface, which provides a powerful technical support for the intelligent dredging of trailing suction dredger.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Loading

Controlled terms:Computer networks - Dredges - Dredging - Genetic algorithms - Hoppers - Optimal control systems

Uncontrolled terms:Loading system - Network communications - Nonlinear characteristics - Optimal control strategy - Optimal design - Suction hopper dredgers - Trailing suction hopper dredger - TSHD

Classification code:691.1 Materials Handling Equipment - 691.2 Materials Handling Methods - 731.1 Control Systems

DOI:10.1109/ICCSNT.2017.8343478

Database:Compendex

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<RECORD 25>

Accession number:20182905548901

Title:Extracting product features from online Chinese reviews

Authors:Chen, Jie (1); Shi, Youqun (1); Luo, Xin (1); Tao, Ran (1); Gu, Yifan (1)

Author affiliation:(1) College of Computer Science and Technology, Donghua University, Shanghai, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Because of the uneven quality of online reviews, the accuracy of product feature extraction from Chinese reviews is not satisfied. For this reason, we propose a method based on the traditional FP-Growth algorithm and Word2Vec model to extract product features from online Chinese reviews in the clothing field. This paper has two contributions. One is to add semantic similarity calculation to avoid low-frequency feature words being deleted in the first step of FP-Growth algorithm. The other is to construct semantic rules to extract latent product features, which makes up the deficiency of the traditional association rule algorithm. An experiment is run for the data set of Chinese reviews on clothing products, which shows that the proposed method can improve the accuracy rate without affecting the recall rate.<br/> &copy; 2017 IEEE.

Number of references:22

Main heading:Computer networks

Controlled terms:Association rules - Extraction - Feature extraction - Semantics

Uncontrolled terms:Association rule algorithm - FP growths - FP-growth algorithm - Low frequency features - Product feature - Semantic similarity - Semantic structures - Word2Vec

Classification code:802.3 Chemical Operations - 903.1 Information Sources and Analysis

DOI:10.1109/ICCSNT.2017.8343700

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 26>

Accession number:20182905548826

Title:The primitive-oriented spatial partition based on BVH

Authors:Yan, Wei (1); Zhao, Jianbin (1); Tang, Feixue (1); Yuan, Shiming (1)

Author affiliation:(1) School of Software and Microelectronics, Peking University, Beijing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Language:English

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The purpose of this thesis is to design a primitive-oriented spatial partition algorithm based on the Bounding Volume Hierarchy (BVH) aiming to accelerate the rendering of general computer. In this dissertation, we designed and implemented a ray tracing program based on primitive-oriented spatial partition, achieved better results than space-oriented spatial partition. The results showed that primitive-oriented spatial partition reduced the cost of memory and time by 73.5% and 73% respectively than for several three-dimensional scene models. Using pixel oriented spatial segmentation in this paper will optimize the efficiency of the spatial segmentation algorithm, which would save the memory usage, and also reduce the layered time.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Three dimensional computer graphics

Controlled terms:Computer graphics - Computer networks - Ray tracing - Rendering (computer graphics)

Uncontrolled terms:Bounding-volume hierarchy - Memory usage - Partition algorithms - Pixel-oriented - Spatial partitioning - Spatial segmentation - Three-dimensional scenes

Classification code:723.5 Computer Applications - 741.1 Light/Optics

Numerical data indexing:Percentage 7.30e+01%, Percentage 7.35e+01%

DOI:10.1109/ICCSNT.2017.8343664

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 27>

Accession number:20182905548774

Title:An improved Quantum Particle Swarm Optimization and its application

Authors:Xuan, Jiao (1); Ming, Huang (2)

Author affiliation:(1) Department of Information Management, Dalian Neusoft University of Information, Dalian, China; (2) Institute of Software, Dalian Jiaotong University, Dalian, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Language:English

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Compared to other intelligent optimization algorithms, Quantum Particle Swarm Optimization (QPSO) possesses the characteristics like rapid convergence rate and outstanding global optimization performance etc. It is more applicable to solve workshop scheduling problems. The article proposes the strategy of improved dynamic reglation of rotation angle to solve multi-objective FJSP problems on the basis of Quantum Particle Swarm Optimization. The method can ensure the position with large variation of adaptive value not over optimal regulation measure, increase the capability to search optimal solution at the position with small variation of adaptive value, and verify the effectiveness of new algorithm through simulation experiement.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Problem solving

Controlled terms:Computer networks - Global optimization - Job shop scheduling - Particle swarm optimization (PSO) - Reactive power - Scheduling

Uncontrolled terms:Flexible job-shop scheduling problem - Intelligent optimization algorithm - Optimal solutions - Quantum particle swarm optimization - Rapid convergence - Regulation measures - Small variations - Workshop Scheduling

Classification code:912.2 Management - 921.5 Optimization Techniques

DOI:10.1109/ICCSNT.2017.8343471

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 28>

Accession number:20182905546778

Title:The generation of software reliability test cases based on software reuse

Authors:Jie, Wang (1); Pei, Tian (1); Wen-Qing, Shi (1); Yan, Xiao (2)

Author affiliation:(1) Information Engineering College, Communication University of China, Beijing, China; (2) Equipment Design Institute, Beijing MTR Design Institute Corporation, Beijing, China

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The generation of software reliability test cases is based on its operational profile, which characterizes the usage of software. So, software reliability test is on the basis of the statistics of software practical usage. Software reuse technology not only enhanced the development efficiency of software but also ensured software quality. So the test on modules with high reliable components can be reduced by applying software reuse analysis to software test, and the modules which contain more unreliable components can allocate more test cases. In this paper, we introduce the reuse analysis and reliability assessment on operations into the generation of software reliability test cases, so the generation method can combines the software operational profile and software reuse.<br/> &copy; 2017 IEEE.

Number of references:12

Main heading:Software reliability

Controlled terms:Computer networks - Computer software reusability - Computer software selection and evaluation - Reliability analysis - Software testing - Testing

Uncontrolled terms:Generation method - High reliable - Operational profile - Reliability assessments - Software Quality - Software reliability tests - Software reuse technology - Test case

Classification code:723 Computer Software, Data Handling and Applications - 723.5 Computer Applications

DOI:10.1109/ICCSNT.2017.8343678

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 29>

Accession number:20182905548848

Title:Quartic generalized ball surfaces with shape parameters and its continuity conditions

Authors:Hu, Gang (1); Luo, Ling (1); Li, Ru (1); Yang, Chen (1)

Author affiliation:(1) School of Science, Xi'An University of Technology, Xi'an, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:5-10

Language:English

ISBN-13:9781538604922

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:A new geometric model of quartic generalized Ball surfaces with multiple shape parameters is constructed using a class of quartic generalized Ball basis functions. The proposed quartic generalized Ball surfaces not only inherit the outstanding properties of the Ball Surfaces, but also have a good performance on adjusting their shapes by changing shape control parameters. To tackle the problem that the engineering complex surfaces can not be constructed by using a single surface, the continuity conditions of quartic generalized Ball surfaces with shape parameter are investigated. Based on the analysis of the basis functions, the conditions of G<sup>1</sup> continuity between two adjacent quartic generalized Ball surfaces are proposed. In addition, some applications in quartic generalized Ball surfaces design are discussed. The modeling examples show that the proposed method is effective and easy to implement, which greatly enhances the ability to constructing complex surface by using quartic generalized Ball surfaces.<br/> &copy; 2017 IEEE.

Number of references:20

Main heading:Complex networks

Controlled terms:Functions

Uncontrolled terms:Basis functions - Complex surface - Continuity conditions - Generalized Ball basis - Generalized Ball surface - Geometric modeling - Shape control - Shape parameters

Classification code:722 Computer Systems and Equipment - 921 Mathematics

DOI:10.1109/ICCSNT.2017.8343467

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 30>

Accession number:20182905548861

Title:An agile framework adaptive to complicated memory workloads for VM migration

Authors:Yu, Simin (1); Lan, Yuqing (1); Wu, Chaoying (1); Han, Tao (1)

Author affiliation:(1) School of Computer Science and Engineering, Beihang University, Beijing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Pages:42-46

Language:English

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:A vital advantage of virtual machines (VMs) is live migration-the ability to transfer VMs from one physical machine to another as the VMs continue to offer service. Some well-known techniques have been proposed for live migration, such as pre-copy and post-copy. Unfortunately, these classical techniques are not agile enough in the face of complicated workloads since they are designed to work well in a specific workload. When the workloads of VMs get complicated, even a good migration algorithm may not run very well. This paper proposes an agile framework which determines the type of workloads of a VM by learning the statistics of usages of memory pages and then the framework chooses an appropriate improved algorithm to complete a VM live migration. The experimental results show that the framework is able to identify the type of workloads, and improves the performance of VM live migration.<br/> &copy; 2017 IEEE.

Number of references:15

Main heading:Virtual machine

Controlled terms:Computer networks

Uncontrolled terms:Classical techniques - Live migrations - Memory pages - Migration algorithms - Online Migration - Vm migrations

DOI:10.1109/ICCSNT.2017.8343474

Database:Compendex

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<RECORD 31>

Accession number:20182905548836

Title:A fast algorithm for touring the disjoint convex polygons in the given order

Authors:Lijuan, Wang (1); Dandan, He (1); Hongfeng, Hou (1); Bo, Jiang (2); Tao, Ning (3)

Author affiliation:(1) School of Information and Science, Dalian Institute of Science and Technology, Dalian, China; (2) College of Information Science and Technology, Dalian Maritime University, Dalian, China; (3) Institute of Software, Dalian Jiaotong University, Dalian, China

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Volume:2018-January

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Pages:107-111

Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Given a start point s, a target point t, and k disjoint convex polygons in the given order in the plane, finding the shortest path of visiting the convex polygons sequence from s to t is the goal. In this paper, we present a fast algorithm to compute the shortest path based on the last step shortest path maps. Firstly, we locate the dividing-points quickly in the two adjacent polygons, which can reduce amounts of iteratively computation. Then, we convert this problem to solving the shortest path of visiting the disjoint line segments sequence which makes the solution much simpler. Furthermore, we analyze the complexity of new algorithm and obtain that it is superior to the previous solution. Finally, we implement this algorithm and show that it is correct.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Computational complexity

Controlled terms:Computer networks - Geometry - Graph theory - Iterative methods

Uncontrolled terms:Convex polygon - dividing-points - Fast algorithms - given order - Line segment - Shortest path - Start point - Target point

Classification code:721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 921 Mathematics

DOI:10.1109/ICCSNT.2017.8343668

Database:Compendex

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<RECORD 32>

Accession number:20182905546897

Title:Using kernel SVM for predicting membrane protein types by fusing PseAAC and DipC

Authors:Cao, Zicheng (1); Wang, Shunfang (1); Guo, Lei (1)

Author affiliation:(1) School of Information Science and Engineering, Yunnan University, Kunming; 650504, China

Corresponding author:Wang, Shunfang(wangsf-66@hotmail.com)

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In order to predict the types of membrane protein accurately, this paper firstly proposed a fusion feature representation, which contains a more comprehensive information of the original protein sequence by fusing two single feature expressions, pseudo amino acid composition (PseAAC) and dipeptide composition (DipC). Then, we proposed an improved support vector machine (SVM) method by introducing the idea of kernel function to evaluate prediction performance of the new fusion representation. In addition, we have deeply studied the influence of three different kernel functions as well as their kernel parameters on the prediction of membrane protein types.-Through experimental verification, it shows that the proposed integration representation with our improved SVM has a good performance in the prediction of membrane protein types. The final overall prediction accuracy can reach up to 89.64% under the Jackknife test method.<br/> &copy; 2017 IEEE.

Number of references:12

Main heading:Support vector machines

Controlled terms:Biological membranes - Computer networks - Forecasting - Proteins - Testing

Uncontrolled terms:Comprehensive information - DipC - Experimental verification - Fusion features - kernelfunction - Prediction performance - PseAAC - Pseudo Amino Acid Compositions

Classification code:461.2 Biological Materials and Tissue Engineering - 723 Computer Software, Data Handling and Applications - 804.1 Organic Compounds

Numerical data indexing:Percentage 8.96e+01%

DOI:10.1109/ICCSNT.2017.8343674

Funding Details: Number; Acronym; Sponsor: 11661081; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 33>

Accession number:20182905548822

Title:A new local optimization method of finite-element mesh

Authors:Jiang, Lei (1); Chen, Wei (1)

Author affiliation:(1) Department of Fundamental Courses, Chengdu Textile College, Chengdu, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In the finite element mesh analysis, researches are always done on displacement and stress in a certain area and higher accuracy is expected to be obtained in that area. If the accuracy of mesh grid is higher or the number of units is increased, the storage space of the computer relatively needs to be larger, the computing time becomes longer and some problems may not be solved by computer. In the local mesh encryption method, only the initial mesh parts of the model are encrypted. Under the condition of accuracy ensured, only the calculating number of nodes of local model needs to be increased in this method without unit dividing for the entire model. In this method, model unit density is increased, storage space and computing time is greatly reduced and the accuracy of calculating is improved.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Computer graphics

Controlled terms:Computer networks - Cryptography - Finite element method - Mesh generation

Uncontrolled terms:astringency - Displacement and stress - Encryption methods - Finite element meshes - Grid refinement - Local optimization methods - Storage spaces - Topological optimization

Classification code:723.5 Computer Applications - 921.6 Numerical Methods

DOI:10.1109/ICCSNT.2017.8343671

Database:Compendex

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<RECORD 34>

Accession number:20182905547038

Title:Protein subnuclear location based on KLDA with fused kernel and effective fusion representation

Authors:Yue, Yaoting (1); Wang, Shunfang (1)

Author affiliation:(1) School of Information Science and Engineering, Yunnan University, Kunming; 650504, China

Corresponding author:Wang, Shunfang(wangsf-66@hotmail.com)

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Discriminated dimensionality reduction algorithm and informative feature representation are equal importance for improving prediction accuracy of protein subnuclear. Based on this thought, this paper simultaneously proposed an effective fused kernel function and an integrated feature expression for predicting protein subnuclear location. To obtain their optimal fusion parameter respectively, the particle swarm optimization (PSO) algorithm was employed to search them during the fusing processes. To verify the feasibility of our proposed approach, a standard public dataset was adopted to carry out the numerical experiment with k-nearest neighbors (KNN) as the classifier. The last results of Jackknife test method can be as high as 94.6779% with our fused kernel and representation, which undoubtedly reveals that our proposed integration method is of efficiency in protein subnuclear localization to a large extent.<br/> &copy; 2017 IEEE.

Number of references:20

Main heading:Particle swarm optimization (PSO)

Controlled terms:Classification (of information) - Computer networks - Location - Nearest neighbor search - Proteins - Testing

Uncontrolled terms:Dimensionality reduction algorithms - Feature representation - fused representation - K nearest neighbor (KNN) - K-NN classifier - Kernel function - Particle swarm optimization algorithm - Subnuclear localization

Classification code:716.1 Information Theory and Signal Processing - 804.1 Organic Compounds - 921.5 Optimization Techniques

Numerical data indexing:Percentage 9.47e+01%

DOI:10.1109/ICCSNT.2017.8343667

Funding Details: Number; Acronym; Sponsor: 11661081; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 35>

Accession number:20182905548772

Title:DNA motif prediction of Shrub Willow (suchowensis) through comparative genetic approach

Authors:Xu, Yiqing (1); Bi, Changwei (1); Wu, Guoxin (1); Zhang, Fuquan (2); Wei, Suyun (2); Jiang, Anna (2); Ye, Ning (2)

Author affiliation:(1) School of Computer Science and Engineering, Southeast University, Nanjing; 211189, China; (2) College of Information Science and Technology, Nanjing Forestry University, Nanjing; 210037, China

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Background: As a convenient experimental target with high research value, willow (salix) has been sequenced recently, and related research based on comparative genetics developed correspondingly. Materials and Methods: In this paper, the strength of completeness of model specie, Arabidopsis thaliana, is applied to the innovative prediction, and by using verified protein database and motif annotation in homologous analysis, motif of Salix suchowensis is annotated. Result: We published a genome-wide DNA motif prediction of S. suchowensis, and manually verified the first 100 genes with the homologous Arabidopsis thaliana motif annotations. Unexpectedly, several motif predictions are detected in the intron region and an interesting but conflicting finding shows that the common belief of that, the motifs are in the region of 100&sim;1000bp upstream the gene, awaits further verifying. Conclusion: This new DNA motif prediction of willow is helpful for constructing a scaffolding guideline in regulatory network study of forestry plants, and the further research of related findings is needed.<br/> &copy; 2017 IEEE.

Number of references:27

Main heading:Forecasting

Controlled terms:Computer networks - DNA - Genes

Uncontrolled terms:Arabidopsis thaliana - DNA motif - Genetic approach - Intron regions - Protein database - Regulatory network - Salix Suchowensis - Shrub Willow

Classification code:461.2 Biological Materials and Tissue Engineering

DOI:10.1109/ICCSNT.2017.8343466

Funding Details: Number; Acronym; Sponsor: 31670554; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61401214; NSFC; National Natural Science Foundation of China

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 36>

Accession number:20182905548831

Title:An efficient algorithm for touring a sequence of given convex polygons in the plane

Authors:Xu, Changan (1); Jiang, Bo (1); Wang, Lijuan (1)

Author affiliation:(1) School of Information Science and Technology, Dalian Maritime University, Dalian, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Given a sequence of ordered convex polygons in which the adjacent polygons may intersect with each other, but the nonadjacent polygons do not intersect, a start point s, and an end point t in the plane, our goal is to obtain a shortest path that starts from s, visits each given polygon in order, and ends at t finally. We converted the touring polygons problem into the problem of computing the shortest path of visiting the disjoint line segments by analyzing the geometrical features of the given convex polygons, and preprocessing the intersection points of the jointed polygons, and using a forward partition process combined with a backward search process for finding the access edge of each convex polygon. Thus, we proposed an 0(max{n, klog2k}) algorithm for solving the original problem, where n is the total number of vertices of the given polygons and k is the total number of polygons.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Problem solving

Controlled terms:Computational geometry - Computer networks - Graph theory

Uncontrolled terms:Algorithm for solving - Convex polygon - Geometrical features - Intersection points - Line segment - Search process - Shortest path - Start point

Classification code:921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI:10.1109/ICCSNT.2017.8343481

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 37>

Accession number:20182905548794

Title:The improved simulated annealing genetic algorithm for flexible job-shop scheduling problem

Authors:Gu, Xiaolin (1); Huang, Ming (1); Liang, Xu (1)

Author affiliation:(1) Software Technology Institute, Dalian Jiao Tong University, DaLian Liaoning Province, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:22-27

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:An improved simulated annealing genetic algorithm (ISAGA) was proposed to solve the complex flexible job-shop scheduling problem (FJSP). In ISAGA, the coding method was based on the combination of working procedure coding and machine allocation coding. In the process of crossover, the improved multi-parent process crossover (IMPC) was proposed. The cloud model theory and the simulated annealing algorithm were introduced in the process of mutation. The X conditional cloud generator in cloud model theory was used to generate the mutation probability in genetic operation. The simulated annealing operation was carried out on the variability of results. In order to avoid the loss of the optimal solution, the optimal individual repository (OIR) was used to store the optimal solution in the process of crossover and mutation. Overcoming the shortcomings of genetic algorithm premature convergence and slow convergence, the experimental results indicated that the proposed algorithm could solve the FJSP effectively and efficiently.<br/> &copy; 2017 IEEE.

Number of references:24

Main heading:Job shop scheduling

Controlled terms:Cloud computing - Codes (symbols) - Computer networks - Genetic algorithms - Optimal systems - Scheduling - Simulated annealing

Uncontrolled terms:Cloud model theories - Cloud modeling - Crossover and mutation - Flexible job-shop scheduling problem - Mutation probability - Pre-mature convergences - Simulated annealing algorithms - Simulated annealing-genetic algorithms

Classification code:537.1 Heat Treatment Processes - 722.4 Digital Computers and Systems - 723.2 Data Processing and Image Processing - 912.2 Management - 921.5 Optimization Techniques - 961 Systems Science

DOI:10.1109/ICCSNT.2017.8343470

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 38>

Accession number:20182905548892

Title:Research on the course discrimination based on multi-classification method and feature selection

Authors:Yuefeng, Zheng (1); Huishi, Du (2); Guijie, Zhang (3); Jing, Gan (2)

Author affiliation:(1) Department of Computer and Information Science, BoDa College of Jilin Normal University, SiPing, China; (2) College of Tourism and Geographical Science, Jilin Normal University, SiPing, China; (3) College of Computer Science, Jilin Normal University, SiPing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

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ISBN-13:9781538604922

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Exam distinction can only reflect a course of the distinction between students. In order to find the main differentiating courses in the university curriculum, the paper proposes the concept of the course differentiation, focusing on the value of course discrimination, the classification method and the proportion of professional courses in selected courses. In order to obtain the value of course differentiation, a method of combining multi-classification and feature selection is proposed. First of all, the data sources of students' achievement are classified by traditional five-level, N-score, M-classification and unsupervised four methods. Then, using the wrapper feature selection method, the classification accuracy rate and the feature subset of each dataset are calculated by different classifiers. Finally, we found the connotation and extension of the course discrimination. Experiments show that the proposed method can find the maximum value of the course distinction and the corresponding classification method, the proportion of professional courses is much larger than the proportion of public courses. It achieves the curriculum and assessment of the distinction requirements.<br/> &copy; 2017 IEEE.

Number of references:22

Main heading:Classification (of information)

Controlled terms:Computer networks - Curricula - E-learning - Feature extraction

Uncontrolled terms:Classification accuracy - Classification methods - course discrimination - Feature selection methods - Feature subset - Multi-classification - University curricula - Unsupervised classification

Classification code:716.1 Information Theory and Signal Processing - 901.2 Education

DOI:10.1109/ICCSNT.2017.8343473

Funding Details: Number; Acronym; Sponsor: 41401002; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61602206; NSFC; National Natural Science Foundation of China

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 39>

Accession number:20182905548834

Title:Research on the competition game between net about car and traditional taxi under internet pus background

Authors:Lin, Fan (1); Leilei, She (1)

Author affiliation:(1) Department of Development and Planning, Northwestern Polytechnical University (NPU), Xi'an, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:47-50

Language:English

ISBN-13:9781538604922

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The car-hailing service is an attempt of combining Internet service and real economy under the Internet plus background. While benefiting the public, it is also challenging the traditional taxi service. Based on the game theory model, the author builds a game model of price subsidy, and will analyze it from the following four aspects: price change on online hailed cars, price change on taxis, change on the number of consumers taking online hailed cars, and change on the profit of online hailed cars and taxis. Based on the analysis, conclusion and suggestions will also be given in this paper as follows: 1. Market supervision should be made concerning the pricing, rules and regulations, promoting activities and subsidies on the online car-hailing service; 2. Government should legalize part of the online hailed cars and control the total amount of taxis in order to develop a fair competition environment; 3. Market supervisors can stimulate the development of traditional taxi service by introducing internet technologies.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Web services

Controlled terms:Commerce - Costs - Game theory - Profitability - Taxicabs

Uncontrolled terms:Competition environments - Consumers' preferences - Internet technology - Market supervisions - Price subsidies - Rules and regulations - Taxi services - the car-hailing service

Classification code:662.1 Automobiles - 911 Cost and Value Engineering; Industrial Economics - 911.2 Industrial Economics - 922.1 Probability Theory

DOI:10.1109/ICCSNT.2017.8343475

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 40>

Accession number:20182905548814

Title:An improved attribute recognition algorithm of overhead line engineering evaluation based on confidence dispersion

Authors:Wenhe, Shi (1); Xiangjun, Liu (1); Mailin, Li (2)

Author affiliation:(1) School of Electrical and Electronic Engineering, North China Electric Power University, Beijing, China; (2) Guangxi Electic Power Dispatch Control Center, Guangxi, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:32-36

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Attribute recognition algorithms are widely used in engineering evaluation. However, the confidence parameters in this algorithm are usually chosen empirically, which has a great influence on the accuracy of engineering evaluation. In this paper, in order to improve the accuracy of the algorithm, a so-called confidence dispersion technical parameter is proposed to describe the influences of the sample data on confidence parameters in attribute recognition model. The numerical dispersion characteristics and the statistical distribution of the optimal confidence intervals are analyzed and the validity of confidence dispersion index has been proved by empirical model derivation and experimental simulation. Then a data-driven attribute recognition evaluation method is proposed based on the proposed confidence dispersion technical parameter, with the confidence parameters adaptive to sample data. According to contrastive simulation results on the technical design evaluation database of 220kV overhead line engineering projects, it has been verified that the proposed algorithm is feasible and effective, which also provides a new idea for the future design quality evaluation tasks of over-head line engineering projects.<br/> &copy; 2017 IEEE.

Number of references:12

Main heading:Parameter estimation

Controlled terms:Computer networks - Dispersions - Overhead lines - Quality control

Uncontrolled terms:Attribute recognition - Attribute recognition model - Confidence interval - Engineering evaluations - Experimental simulations - Numerical dispersions - Parameters adaptive - Statistical distribution

Classification code:706.2 Electric Power Lines and Equipment - 913.3 Quality Assurance and Control - 951 Materials Science

Numerical data indexing:Voltage 2.20e+05V

DOI:10.1109/ICCSNT.2017.8343472

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 41>

Accession number:20182905546875

Title:Recommendation based on trust and distrust social relationships

Authors:Fei, Zhen-Qian (1); Sun, Wei (1); Sun, Xiao-Xin (1); Feng, Guo-Zhong (1); Zhang, Bang-Zuo (1)

Author affiliation:(1) School of Computer Science and Information Technology, Northeast Normal University, Changchun, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Publication year:2018

Pages:256-260

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Recommender system has become increasingly popular in recent years, since it is an effective way to solve the problem of information overload problem. But it is still subject to some inherent problems, such as data sparseness and cold start. Many studies show that the integration of social network information is a very effective way to solve such issues. The studies on recommendation methods that incorporate social relationships, not only take into account the preferences of the user for the item, but also the interaction between the users according to their behavior and the social relationships. And now, the application of social relationships has extended from the trust relationships to the distrust relationships. While the collaborative filtering is the most important and widely used recommendation method, there is little work on combining with trust and distrust social network relationships. So, this paper proposes the methods of integration the trust and distrust social relationships, TDUCF1 and TDUCF2, and with the improved cosine similarity, to improve the collaborative filtering recommendation algorithm, which combined the users' trust and distrust social relationships, and effectively alleviated the sparseness. The experimental results show that the proposed methods outperform the state-of-art algorithms.<br/> &copy; 2017 IEEE.

Number of references:15

Main heading:Collaborative filtering

Controlled terms:Computer networks - Problem solving - Social aspects - Social networking (online)

Uncontrolled terms:Collaborative filtering recommendations - Cosine similarity - Distrust relationships - Information overloads - Recommendation methods - Social network informations - Social relationships - Trust relationship

Classification code:723 Computer Software, Data Handling and Applications - 901.4 Impact of Technology on Society - 903.1 Information Sources and Analysis

DOI:10.1109/ICCSNT.2017.8343698

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 42>

Accession number:20182805544665

Title:Research on the construction of demand response standard system and evaluation method of applicability

Authors:Dong, Mingyu (1); Tian, Shiming (1); Qiao, Xueming (2); Liu, Yanhong (2); Wang, Yiliang (2); Liu, Sifang (3); Qi, Bing (3); Li, Bin (3)

Author affiliation:(1) China Electric Power Research Institute, Beijing, China; (2) State Grid Shandong Electric Power Company, WeiHai Power Supply Company, Shandong, China; (3) School of Electric and Electronic Engineering, North China Electric Power University (NCEPU), Beijing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Pages:380-384

Language:English

ISBN-13:9781538604922

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Based on the analysis of the domestic and foreign research actuality of the demand response standard system, this paper summarizes the existing standardization requirements of smart grid demand response, studies the principles and processes of the demand response standard system, studies the construction principles of the standard suitability evaluation system, and designs the evaluation model of the applicability of demand response standards, therefore providing support for future demand response standard research.<br/> &copy; 2017 IEEE.

Number of references:13

Main heading:Computer networks

Controlled terms:Computer science - Computers

Uncontrolled terms:Construction method - Construction principle - Demand response - Evaluation modeling - Smart grid - Standard system - Suitability evaluation

DOI:10.1109/ICCSNT.2017.8343723

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 43>

Accession number:20182805544322

Title:Design of IIR digital filter

Authors:He, Ping (1); Chang, Hongli (1); Gao, Han (1); Wang, Ziyi (1)

Author affiliation:(1) Department of Control Science and Engineering, Harbin Institute of Technology, Harbin, Heilongjiang Province, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

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Pages:506-507

Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In the field of signal process, the real-Time and rapidity requirements of signal processing become higher and higher. The filter has been used widely, such as used in detecting and predicting of the signal. Digital filter has many outstanding advantages such as high stability, high precision, design flexible, easy to implement. It can overcome the problems such as voltage drift and temperature drift and noise. With the development of digital technology, digital technology is used to implement filter function. It has gotten people's attention and been used widely.<br/> &copy; 2017 IEEE.

Number of references:5

Main heading:IIR filters

Controlled terms:Computer networks - Signal processing

Uncontrolled terms:component - formatting - insert - style - styling

Classification code:703.2 Electric Filters - 716.1 Information Theory and Signal Processing

DOI:10.1109/ICCSNT.2017.8343749

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 44>

Accession number:20182805544240

Title:Research of security risk in electric power information network

Authors:Li, Feng (1); Chen, Jia (1); Shu, Fei (1); Zhang, Jianye (2); Qing, Song (2); Guo, Wenbin (3)

Author affiliation:(1) Information and Communication Technology Center, State Grid Xinjiang Electric Power Research Institute, Urumqi, China; (2) Information Office, State Grid Xinjiang Electric Power Company, Urumqi, China; (3) Information and Communication Center, State Grid Altay Electric Power Supply Company, Altay, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Pages:361-365

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The factors that threaten electric power information network are analyzed. Aiming at the weakness of being unable to provide numerical value of risk, this paper presents the evaluation index system, the evaluation model and method of network security based on multilevel fuzzy comprehensive judgment. The steps and method of security evaluation by the synthesis evaluation model are provided. The results show that this method is effective to evaluate the risk of electric power information network.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Network security

Controlled terms:Computer networks - Electric network parameters - Information services - Numerical methods - Risk assessment

Uncontrolled terms:Evaluation index system - Evaluation modeling - Fuzzy comprehensive judgment - Fuzzy judgment - Information networks - Security evaluation - styling - Synthesis evaluation

Classification code:703.1 Electric Networks - 723 Computer Software, Data Handling and Applications - 903.4 Information Services - 914.1 Accidents and Accident Prevention - 921.6 Numerical Methods

DOI:10.1109/ICCSNT.2017.8343719

Database:Compendex

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<RECORD 45>

Accession number:20182905548819

Title:Design and implementation of building information collection system for earthquake disaster scenario construction based on GIS

Authors:Tan, Qing-Quan (1); Liu, Qun (1); Luo, Hua-Chun (1); Liu, Bo (1); Liu, Jian (2)

Author affiliation:(1) Earthquake Disaster Prevention Center, Beijing Earthquake Agency, Beijing, China; (2) Key Laboratory of Digital Earth Science, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China

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Volume:2018-January

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Earthquake often inflicts severe casualties and property losses. Building information data play an important role in earthquake damage evaluation and emergency countermeasures. In this paper, a novel approach for building information collection is proposed and implemented, which is based on GIS technology. The system design is concisely presented, and the research results are introduced. The research results are applied in real earthquake work, and are significant to enhance the earthquake emergency response capability.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Earthquakes

Controlled terms:Computer networks - Disasters - Geographic information systems

Uncontrolled terms:Design and implementations - Earthquake damages - Earthquake disaster - Earthquake emergency response - GIS technology - Information collections - Information data - Research results

Classification code:484 Seismology - 903.3 Information Retrieval and Use

DOI:10.1109/ICCSNT.2017.8343476

Database:Compendex

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<RECORD 46>

Accession number:20182805544416

Title:The online system of measuring film thickness

Authors:He, Ping (1); Chang, Hongli (1); Gao, Han (1); Wang, Ziyi (1)

Author affiliation:(1) Department of Control Science and Engineering, Harbin Institute of Technology, Harbin, Heilongjiang Province, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

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Pages:503-505

Language:English

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Measuring Film Thickness is not only an important part for controlling the precision of the products, but also can reduce the cost. This system is based on the core processor (TMS32-0F2812), and it has four parts: optical signal driving circuit, analog signal acquisition and processing circuit, data sampling and processing circuit and human machine interaction. This system uses CCS software development platform as its software development environment, and it meets all functional requirements through programming and debugging.<br/> &copy; 2017 IEEE.

Number of references:7

Main heading:Program debugging

Controlled terms:Computer networks - Data handling - Film thickness - Functional programming - Online systems - Plastic films - Signal processing - Software design

Uncontrolled terms:Analog-signal acquisition - CCS Introduction - Data sampling - Functional requirement - Human machine interaction - Processing circuits - Software development environment - TMS320F2812

Classification code:716.1 Information Theory and Signal Processing - 722.4 Digital Computers and Systems - 723.1 Computer Programming - 723.2 Data Processing and Image Processing - 817.1 Polymer Products

DOI:10.1109/ICCSNT.2017.8343748

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 47>

Accession number:20182805544268

Title:A multi-service adaptive wireless communication protocol for industrial networks

Authors:Zhu, Shan (1); Xiao, Shi (1)

Author affiliation:(1) Wuhan Textile University, School of Electronic and Electrical Engineering, Wuhan, Hubei; 430072, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

ISBN-13:9781538604922

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Industrial networks play a very important role in this round of industrial upgrading and transformation, but at the same time, more and more applications appear in industrial production, which need to be supported by industrial networks, especially wireless networks. These different kinds of applications have different Quality of Service (QoS) requirements. The existing wireless communication protocols usually only aim at specific type of applications, and are not suitable for the coexistence of multi-service production environment. In this paper, a new extension protocol is proposed to address the challenge, which is based on PCF model of 802.11 protocols. Simulation results show that the proposed protocol aggregates different systems.<br/> &copy; 2017 IEEE.

Number of references:12

Main heading:Quality of service

Controlled terms:IEEE Standards - Wireless telecommunication systems

Uncontrolled terms:802.11 - High reliability - Industrial networks - Intelligent Manufacturing - Low latency - PCF mode

DOI:10.1109/ICCSNT.2017.8343721

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 48>

Accession number:20182805543908

Title:Efficient incremental checkpoint based on hybrid page

Authors:Wang, Ruibo (1); Zhang, Wenzhe (1)

Author affiliation:(1) College of Computer, National University of Defense Technology, Changsha, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Modern computer systems are suffering from various failures and are increasingly prone to error. This paper introduces a high efficient incremental checkpoint mechanism for fault tolerance. By leveraging the new hardware support for various page sizes, we make dynamic transformation between different sized pages and thus achieve the best balance of overhead between modification tracking and data dumping in incremental checkpoint. Experiments show that our new checkpoint mechanism could achieve an average speedup of 2.2x with the space overhead of 34% over traditional incremental checkpoint, showing great potential to be widely adopted.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Computer networks

Controlled terms:Computer hardware - Fault tolerance - Fault tolerant computer systems - Hardware - Metadata - Websites

Uncontrolled terms:Dynamic transformation - Hardware supports - High efficient - incremental checkpoint - Modern computer systems - Page sizes - Space overhead

Classification code:605 Small Tools and Hardware - 722 Computer Systems and Equipment - 722.4 Digital Computers and Systems

Numerical data indexing:Percentage 3.40e+01%

DOI:10.1109/ICCSNT.2017.8343683

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 49>

Accession number:20182805544503

Title:Research on cattle farm management information system

Authors:He, Ping (1); Chang, Hongli (1); Gao, Han (1); Wang, Ziyi (1)

Author affiliation:(1) Department of Control Science and Engineering, Harbin Institute of Technology, Harbin, Heilongjiang, Province 1, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:508-510

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Nowadays, People put increasingly higher demands on the quality of life. How to develop a set of health and efficient dairy farm system has become an important issue. This paper mainly researches dairy farm management, using AVR and 24L01 wireless module to design a set of zap automation management system. It realizes the full automation of the dairy farm management. First, this paper puts forward the implementation of the system function and the overall scheme. I design the structure of the system, then, I design the hardware circuit of the system, including the function of each module and the working process of the system, Finally, the cow management system software is designed.<br/> &copy; 2017 IEEE.

Number of references:6

Main heading:Information management

Controlled terms:Computer networks - Farms - Wireless telecommunication systems

Uncontrolled terms:Automation management - Electronic tags - Hardware circuits - Quality of life - System functions - Wireless communications - Wireless module - Working process

Classification code:821 Agricultural Equipment and Methods; Vegetation and Pest Control

DOI:10.1109/ICCSNT.2017.8343750

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 50>

Accession number:20182905548852

Title:On-line strategies for evacuating from an unknown grid network area in the plane by groups

Authors:Yao, Pengfei (1); Jiang, Bo (1); Jia, Yiyang (1)

Author affiliation:(1) School of Information Science and Technology, Dalian Maritime University, Dalian, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:69-73

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:This paper focuses on studying the online strategies of evacuating problems in a gird network. First, we proved that the double strategy can work well for solving the single source point evacuating problem in the grid network, even the boundary of the affected area is a concave polygon, and proposed a 24-competitive evacuating strategy for the evacuating problem by two groups. Then, we studied the multi-source points evacuating problems, and proposed respectively a 24-competitive evacuation strategy for 2-source points and a 16-competitive evacuation strategy for 4-source points to solve the evacuating problems in the grid network.<br/> &copy; 2017 IEEE.

Number of references:13

Main heading:Computer networks

Controlled terms:Computational geometry - Problem solving

Uncontrolled terms:Affected area - Competitive ratio - Concave polygons - Evacuation strategy - Grid network - Multi-Sources - Online Strategy - Single source

Classification code:723.5 Computer Applications

DOI:10.1109/ICCSNT.2017.8343480

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 51>

Accession number:20182905548817

Title:An efficient multi-pattern matching applied to delimit PPTX document data stream

Authors:Ding, Simiao (1); Wang, Xiaomei (1); Yang, Dongyu (1); Zheng, Yao (1)

Author affiliation:(1) Information Engineering University, Department of Communication Engineering, Zhengzhou, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:118-122

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Aimed to reduce the time of effective content delimitation during the process of pptx document recovery, this paper proposed a multi-pattern matching WM-P algorithm, which is based on WM algorithm. Firstly, this paper analyzed the applicable situation of classical multi-pattern matching algorithms. Then, based on the WM algorithm and the feature of information source structure and pattern set, this paper proposed an idea of the dynamic model set, which is optimized the jumping mechanism and the matching order. Finally, it is proved by experimental verification that compared with the existing algorithms, the matching performance of WM-P algorithm has been significantly improved.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Pattern matching

Controlled terms:Computer networks - Computer system recovery

Uncontrolled terms:Data stream - delimitation - Document recovery - Experimental verification - Information sources - Jumping mechanisms - Matching performance - Multi-pattern matching

DOI:10.1109/ICCSNT.2017.8343670

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 52>

Accession number:20182805544481

Title:An overlapping community detection algorithm based on L&eacute;vy flight

Authors:Sun, Qijuan (1); Deng, Guoliang (1); Chun, Hao (2); Nian, Qing (2); Li, Longjie (1); Ma, Zhixin (1)

Author affiliation:(1) School of Information Science and Engineering, Lanzhou University, Lanzhou; 730000, China; (2) Lanzhou Municipal Public Security Bureau, Lanzhou, China

Corresponding author:Ma, Zhixin(mazhx@lzu.edu.cn)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

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Pages:236-240

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Considering the phenomenon that most intelligent optimization algorithms easily plunge into local optimum when solving the complex problem of overlapping community detection, LFOCDA, an overlapping community detection algorithm based on L&eacute;vy flight, is proposed in this paper. An extended modularity function has been used as the quality measurement standard of overlapping community division. During the iterative renewed process, L&eacute;vy flight has been introduced owing to the variable-step random walk characteristic, so that the algorithm has a chance to jump out of local optimum, thus expanding the search range and guiding the search closer to global optimal solution. Enormous experimental results have verified the effectiveness and adaptability of the algorithm.<br/> &copy; 2017 IEEE.

Number of references:16

Main heading:Iterative methods

Controlled terms:Computer networks - Population dynamics - Signal detection

Uncontrolled terms:Complex problems - Global optimal solutions - Intelligent optimization - Intelligent optimization algorithm - modularity - Overlapping communities - Overlapping community detections - Quality measurements

Classification code:716.1 Information Theory and Signal Processing - 921.6 Numerical Methods - 971 Social Sciences

DOI:10.1109/ICCSNT.2017.8343694

Funding Details: Number; Acronym; Sponsor: 61602225; NSFC; National Natural Science Foundation of China

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 53>

Accession number:20182805544553

Title:A long track on backbone nodes of content sharing networks

Authors:Lu, Qiang (1); Liu, Bo (1); Hu, Huaping (1)

Author affiliation:(1) College of Computer, National University of Defense Technology, Changsha, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:405-409

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:As a kind of sharing platform for files, information and resources, Content Sharing Networks (CSNs) are faced with a serious security situation of swarming malicious files, illegal information and spywares, especially the mainstream P2P (Peer-to-Peer) CSNs. Apart from the familiar importance for the rapid development and wide application of CSNs, backbone nodes should have been paid more attention for their significance to monitor and mitigate malicious sharing contents. In this paper, we proposed a comprehensive and effective determining method named MED to distinguish backbone nodes during the longest ever tracking and in-depth analysis of CSNs for nearly four years.<br/> &copy; 2017 IEEE.

Number of references:30

Main heading:Peer to peer networks

Controlled terms:Malware

Uncontrolled terms:Backbone nodes - Content Sharing - LCrawler - MED determining - new normal

Classification code:722 Computer Systems and Equipment - 723 Computer Software, Data Handling and Applications

DOI:10.1109/ICCSNT.2017.8343728

Funding Details: Number; Acronym; Sponsor: 61572513; NSFC; National Natural Science Foundation of China

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 54>

Accession number:20182905548804

Title:The research of efficient publishing of subscription system

Authors:Xiao, Yan (1); Cui, Zongmin (1); Yu, Jing (1); Gao, Guangyong (1); Zhou, Caixue (1)

Author affiliation:(1) School of Information Science and Technology, Jiujiang University, Jiujiang, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:16-21

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:This article discusses a system in detail. The design and implementation of an efficient subscription system is based on the PC. In a publishing subscription system, the subscription is represented by a Boolean expression. When the data is published by the master, the data owner publishes an event that corresponds to the data. When the data event matches the subscription Boolean expression, the data is sent to the user who subscribes to the data. Publishers publish data for this operation by using the conjunction index. The matching results are given automatically by the system. The system has a clean interface and simple operation. It is easy to maintain later.<br/> &copy; 2017 IEEE.

Number of references:16

Main heading:Computer networks

Controlled terms:Computer science - Computers

Uncontrolled terms:Boolean expressions - Data matching - Data owners - Design and implementations - Efficient Subscription - Java - MySQL - Simple operation

DOI:10.1109/ICCSNT.2017.8343469

Funding Details: Number; Acronym; Sponsor: 61362032; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61462048; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61662039; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61762055; NSFC; National Natural Science Foundation of China

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 55>

Accession number:20182805544222

Title:Iterative sparse channel estimator based on SpaRSA approach

Authors:Shi, Xiaolin (1); Wang, Honglei (2); Leung, Shu-Hung (3)

Author affiliation:(1) School of Electronics Engineering, Xi'An University of Posts and Telecommunications, Xi'an, China; (2) International Office, Xi'An University of Posts and Telecommunications, Xi'an, China; (3) Department of Electronic Engineering, City University of Hong Kong, Hong Kong, Hong Kong

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

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Issue date:April 19, 2018

Publication year:2018

Pages:356-360

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In this paper, an iterative sparse channel estimation for orthogonal frequency division multiplex (OFDM) communication system is investigated based on the sparse reconstruction by separable approximation (SpaRSA), which is regarded as one of the fastest algorithms for l<inf>2</inf>-lj problem and can obtain its global optimal solution. The proposed estimator comprised of thresholding is applied to detect channel taps. Then, a modified SpaRSA with adaptive regularization parameter is used to refine the estimation of nonzero channel taps. Simulation results for typical sparse channels show effectiveness of the proposed algorithm over other existing methods.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Channel estimation

Controlled terms:Approximation algorithms - Computer networks - Frequency estimation - Iterative methods - Orthogonal frequency division multiplexing

Uncontrolled terms:Adaptive regularization parameter - Global optimal solutions - Non-zero channels - Orthogonal frequency division multiplexes (OFDM) - Separable approximation - Sparse channel estimations - Sparse channels - Sparse reconstruction

Classification code:921 Mathematics - 921.6 Numerical Methods

DOI:10.1109/ICCSNT.2017.8343718

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 56>

Accession number:20182805544137

Title:Design and implementation of knowledge service system of Tujia brocade culture based on IOS

Authors:Zhao, Gang (1); Luo, Zhuoran (1); Zhao, Dasheng (2); Lu, Shuai (1); Yu, Peng (1); Zan, Hui (3)

Author affiliation:(1) School of Educational Information Technology, Central China Normal University, Wuhan; 430079, China; (2) Wuhan Maritime Communication Research Institute, Wuhan; 430079, China; (3) National Engineering Research Center for E-Learning, Central China Normal University, Wuhan; 430079, China

Corresponding author:Zan, Hui(zxydhh@163.com)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

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Pages:157-160

Language:English

ISBN-13:9781538604922

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:As the first batch of Chinese intangible culture heritage, it is imperative to finish the digital protection works of Tujia brocade. The design and development of system providing knowledge service for Tujia brocade culture are completed with advantages of good user experience and excellent performance of iOS platform. Additionally, functions of the system such as Tujia brocade knowledge browsing, knowledge retrieval, knowledge recommendation and others have been completed, which can provide a good digital platform for users to acquire cultural knowledge of Tujia brocade anytime and anywhere. The study can effectively promote the digital protection of Tujia brocade, which has important theoretical and practical significance.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Silk

Controlled terms:Computer networks

Uncontrolled terms:Cultural knowledge - Design and Development - Design and implementations - Digital protection - Knowledge retrieval - Knowledge service - Knowledge service systems - Tujia Brocade

Classification code:819.1 Natural Fibers

DOI:10.1109/ICCSNT.2017.8343677

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 57>

Accession number:20182805544491

Title:Networking research of observation instruments based on IPv6 technology

Authors:Huo, Jiuyuan (1, 2); Ren, Zhinan (1); Yang, Yongru (1); Ren, Milin (3)

Author affiliation:(1) School of Electronic and Information Engineering, Lanzhou Jiaotong University, Lanzhou, China; (2) 2CERNET Co., Ltd., Beijing, China; (3) Beijing Engineering Research Center of NGI and Its Major Application Technologies Co., Ltd., Beijing, China

Corresponding author:Huo, Jiuyuan(huojy@mail.lzjtu.cn)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Pages:325-329

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The harsh natural environments of the High altitude, cold and arid areas led to the deficient acquisition ability of field monitoring data and the insufficient networking researches and so on. Thus, it seriously restricts the Geoscience researches in these areas. Combining the practical situation of the observation systems deployed in the field station, this paper studies the key technologies of observation instruments networking based on the IPv6 technology to construct the observation instruments' network in the cold and arid areas. The research is to realize the tasks of data collection, data transmission and status monitoring of observation devices. It can enhance the automation level, real-time performance and quality of field observation data for the cold and arid areas.<br/> &copy; 2017 IEEE.

Number of references:16

Main heading:Internet protocols

Controlled terms:Arid regions - Computer networks - Data acquisition - Monitoring

Uncontrolled terms:Field monitoring data - Field observation data - Gateway nodes - IPv6 - Natural environments - Networking - Networking Node - Real time performance

Classification code:443 Meteorology - 444 Water Resources - 723 Computer Software, Data Handling and Applications - 723.2 Data Processing and Image Processing

DOI:10.1109/ICCSNT.2017.8343711

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 58>

Accession number:20182805544457

Title:Performance assessment of GNSS measurements from Android platform

Authors:Liu, Jiyuan (1); Hu, Yifan (1); Zhang, Dongsong (2); Liu, Huafu (3)

Author affiliation:(1) School of Computer Science, National University of Defense Technology, Hunan, China; (2) Watercraft College, Jiangsu, China; (3) Department of Math and Computer Science, Changsha University, Changsha, China

Corresponding author:Liu, Huafu(hfliu@163.com)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Positioning on mobile phones performs a fundamental role in our daily life. Recently, Google released some new interfaces to obtain GNSS measurements which provide application developers a new option to calculate position on Android phones. In this research, the measurements are collected in Google Nexus 9 operating on Android 7.0 OS. First, some aspects, such as VSN (Visible Satellite Number), HDOP (Horizontal Dilution of Precision) and CNR (Carrier to Noise Ratio), are assessed. Then, estimated position and velocity are calculated and assessed. Finally, the precision of position generated from integrating the velocity information into estimated position with KF (Kalman Filter) is also evaluated. We believe our assessments will give application developers guidance when they use Android GNSS measurements in positioning.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Android (operating system)

Controlled terms:Computer networks - Global positioning system - Telephone sets

Uncontrolled terms:Android platforms - Android positioning - Application developers - Carrier to noise ratio - GNSS measurements assessment - Horizontal dilution of precision - Performance assessment - Velocity information

Classification code:718.1 Telephone Systems and Equipment - 723 Computer Software, Data Handling and Applications

DOI:10.1109/ICCSNT.2017.8343742

Funding Details: Number; Acronym; Sponsor: 61379117; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61402527; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61572514; NSFC; National Natural Science Foundation of China

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 59>

Accession number:20182805544385

Title:Multi-domain routing technology based on PCE for intelligent optical networks

Authors:Zhou, Hongsheng (1); Song, Xiaoqian (2); Lin, Li (1); Du, Li (2)

Author affiliation:(1) Computer Science and Engineering, Northeastern University, Shenyang, China; (2) Division of Engineering and Applied Science, California Institute of Technology, Pasadena, United States

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

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Pages:415-419

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The deployment of PCE (Path Computation Element) architecture in high-speed MPLS/GMPLS networks is widely accepted and facilitates path setup operations for applications with explicitly defined objective functions. In this paper, we propose a new link-abstraction mechanism, which improves the method of establishing domain topology of parent PCE, and further aggregates the abstract topology in the hierarchical PCE method, thus simplifying the topology aggregation of the multi-domain. Meanwhile, considering the constraints of multiple factors which affect cross-domain path calculations, we provide a relatively simple way to select, which solves the key problem of determining the 'domain sequence' in the process of cross-domain path calculation. Simulation results show that the proposed method has better performance in terms of blocking probability, end-to-end delay and resource utilization rate.<br/> &copy; 2017 IEEE.

Number of references:9

Main heading:Computer networks

Controlled terms:Blocking probability - Topology

Uncontrolled terms:Abstraction mechanism - Cross-domain - domain sequence - Hierarchical PCE - Intelligent optical networks - Multi domains - Path computation elements - Topology aggregations

Classification code:921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI:10.1109/ICCSNT.2017.8343730

Funding Details: Number; Acronym; Sponsor: 61401081; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 60>

Accession number:20182805544408

Title:Secure performance analysis of a satellite-terrestrial network with multi-eavesdroppers

Authors:Guo, Kefeng (1); Zhang, Bangning (1); Guo, Daoxing (1)

Author affiliation:(1) College of Communications Engineering, PLA University of Science and Technology, Nanjing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Pages:395-399

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In this paper, the secure performance of a satellite terrestrial communication network in shadowed-Rician (SR) channel is investigated, a satellite, a terrestrial destination and multi-single-antenna terrestrial eavesdropper are considered. Co-operating eavesdropper's scheme is used in this paper. Specially, the exact closed-form expressions of the system performance are derived, which provide fast means to evaluate the effect of system parameters on the system performance. Finally, Monte Carlo simulation results are derived to verify the superiority of the correctness of the analytical results, which also demonstrate the effects of various parameters on the secrecy performance of the satellite terrestrial networks.<br/> &copy; 2017 IEEE.

Number of references:30

Main heading:Network security

Controlled terms:Antennas - Communication satellites - Computer networks - Intelligent systems - Monte Carlo methods - Satellites

Uncontrolled terms:Closed-form expression - cooperating scheme - Multi eavesdroppers - Performance analysis - Satellite-terrestrial network - Secure performance - Shadowed rician - Terrestrial communication

Classification code:655.2 Satellites - 655.2.1 Communication Satellites - 723 Computer Software, Data Handling and Applications - 723.4 Artificial Intelligence - 922.2 Mathematical Statistics

DOI:10.1109/ICCSNT.2017.8343726

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 61>

Accession number:20182905546912

Title:DMS: A Dynamic Multi-Tiered Storage with deduplication based on variable-sized chunks

Authors:Liu, Xiao (1); Zhou, Bin (1)

Author affiliation:(1) College of Computer Science, South-Central University for Nationalities, Wuhan, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

ISBN-13:9781538604922

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:It's known that multi-Tiered storage has grown up to be a viable solution today for storage systems which combines the advantages of high capacity, quick access and low cost together. In this paper, we propose Dynamic Multi-Tiered Storage (DMS), which efficiently combines multi-Tiered storage and deduplication based on variable-sized chunks. DMS has a high Data Elimination Ratio (DER), optimizing the storage performance of Multi-Tiered storage with data elimination. We also present and implement the Dynamic Adaptive Replacement Cache (D-ARC) which bears the merits of higher efficiency, scalability, compatibility. By comparing with ARC, D-ARC reduces the average access time by 8.7%, and increases the average hit rate by 9.3%.<br/> &copy; 2017 IEEE.

Number of references:26

Main heading:Digital storage

Controlled terms:Computer networks

Uncontrolled terms:Cache replacement policy - De duplications - Dynamic-adaptive - Higher efficiency - Multi-tiered - Storage performance - variable-sized chunks - Viable solutions

Classification code:722.1 Data Storage, Equipment and Techniques

Numerical data indexing:Percentage 8.70e+00%, Percentage 9.30e+00%

DOI:10.1109/ICCSNT.2017.8343672

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 62>

Accession number:20182805544341

Title:An image restoration method based on cross-correlation

Authors:Hu, Yao (1); Xu, Yunfei (1)

Author affiliation:(1) Institute of Optics, Department of Physics, Zhejiang University, Hangzhou, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Interference often appears between camera and object during imaging. In this paper, an image restoration method in video sequences based on cross-correlation is proposed. A submerged object with modulated light and interference is recorded by a high speed camera. The captured data and the modulated light are regarded as input signal and reference signal, respectively. A new pixel matrix is obtained and can be restored by filtering additive noise after executing a cross-correlation operation between the signals. Experimental results demonstrate that the method can eliminate interference and enhance image quality efficiently.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Image reconstruction

Controlled terms:Additive noise - Algorithms - Computer networks - High speed cameras - Image enhancement - Image processing - Restoration

Uncontrolled terms:Cross correlations - Modulated light - Reference signals - Restoration methods - Submerged object - Video sequences

Classification code:703 Electric Circuits - 742.2 Photographic Equipment

DOI:10.1109/ICCSNT.2017.8343734

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 63>

Accession number:20182905546954

Title:Research on the overall design scheme of consistency test system

Authors:Chen, Songsong (1); Li, Dezhi (2); Dong, Mingyu (3); Yang, Bin (1); Liu, Changli (1); Sun, Yi (1); Li, Bin (1)

Author affiliation:(1) China Electric Power Research Institute, Beijing, China; (2) State Grid Jiangsu Electric Power Company, Nanjing, China; (3) School of Electric and Electronic Engineering, North China Electric Power University (NCEPU), Beijing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Issue date:April 19, 2018

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Pages:170-174

Language:English

ISBN-13:9781538604922

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:As the rapidly expanding of Demand Response and some other intelligent power usage business, the types of related equipment and systems increase sharply. The problem of connectivity between diversified systems needed to be solved urgently, and the vast need of consistency test in domestic was motivated. Started from the bottom logic of consistency test, combined with consistency test model of protocol specified in ISO/IEC-9646, as well as the black box test and some other specific test methods, overall design scheme about consistency test system was presented in this paper, with the characteristics of well universality. Meanwhile, the development tendency about consistency test was analyzed. This paper could provide some references for the consistency test of Demand Response technology field, and play a basic support role in the Demand Response business and some other relevant energy technology fields.<br/> &copy; 2017 IEEE.

Number of references:13

Main heading:Design

Controlled terms:Computer networks

Uncontrolled terms:Consistency tests - Development tendency - Energy technologies - Intelligent power - Overall design - Requirement analysis - Specific test methods - Technology fields

DOI:10.1109/ICCSNT.2017.8343680

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 64>

Accession number:20182805544390

Title:The algorithm of objective questions marking system based on projection method

Authors:Zhang, Daofang (1)

Author affiliation:(1) Guizhou University for Nationalities, Huaxi, Guiyang, China

Corresponding author:Zhang, Daofang(1042542950@qq.com)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:463-466

Language:English

ISBN-13:9781538604922

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In all kinds of marking process on objective questions, manual grading is not only a heavy workload, but also occurrs error because of people's fatigue. Therefore, a novel approach is proposed in this paper. Firstly, the special answer card of examination paper is projected several times so that each option is split out from each line. Secondly, the center of gravity for each option is calculated and the circle with the center of gravity as the center and r as the radius is defined. In the end, the number of white dots in the circle is counted, the largest number is the chosen answer. The experimental results show that this method is effective for the given sample.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Computer networks

Controlled terms:Grading - Image processing

Uncontrolled terms:automatic marking - Center of gravity - Heavy workloads - Marking system - ojective qestions - pojection - Projection method

DOI:10.1109/ICCSNT.2017.8343740

Database:Compendex

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<RECORD 65>

Accession number:20182805544163

Title:Fast load group resources regulation based on logical channel mechanism

Authors:Xue, Jinsong (1); Jing, Dongsheng (1); Wang, Fang (1); Xu, Peng (2); Sun, Yi (2); Li, Bin (2)

Author affiliation:(1) State Grid Su Zhou Power Supply Company, JiangSu, China; (2) School of Electric and Electronic Engineering, North China Electric Power University (NCEPU), Beijing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:375-379

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Large receiving end grid has characteristics such as low capacity, poor fault tolerance. In the case of unexpected fault, aiming at the demand of emergency load regulation, a method is proposed here that the load group can quickly participate in the resource control based on logical channel mode. Firstly, the paper analyzes the existing architecture of load regulation, pointing out the limitation of its control process. Then this paper put forward the rapid control structure based on the logical channel mechanism, which further elaborated its concrete realization scheme, including business division, user analysis and control scheme. Finally, the advantages of the proposed method are analyzed and the great effectiveness of the logic channel mode on power emergency response is clarified.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Computer circuits

Controlled terms:Computer networks - Fault tolerance

Uncontrolled terms:Emergency response - Existing architectures - Fast response - Load regulations - Logic channels - Logical channels - Realization schemes - Resource control

Classification code:721.3 Computer Circuits

DOI:10.1109/ICCSNT.2017.8343722

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 66>

Accession number:20182805544024

Title:Research on technology and application of tag portrait based on electric power big data

Authors:Zhong, Chunlin (1); Lv, Hui (1); Ji, Cong (1); Xu, Mingzhu (1); Fang, Chao (1); Li, Kunming (1)

Author affiliation:(1) Jiangsu Frontier Electric Technology CO. LTD, Nanjing, Jiangsu Province; 211102, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:222-225

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:There are many problems caused by more and more electric power big data application such as the increase of learning cost and the use threshold, professional specialists can unscramble the result of using data analysis and so on. According to these problems, this paper introduces a tag portrait technology which is based on electric power big data and includes the general idea, the structure of technology and key implementation technology and so on. The result of data analysis of information system is explained and translated into language text in daily production and concretized presentation by research, which can help people pay attention to business innovation and creation. This is a beneficial exploration and attempt for electric power big data to be used to practical method and mechanism of production management.<br/> &copy; 2017 IEEE.

Number of references:13

Main heading:Big data

Controlled terms:Computer networks - Data handling - Information analysis - Search engines

Uncontrolled terms:Big data applications - Business innovation - Daily production - Electric power - Enterprise searches - Practical method - Production management - tag portrait

Classification code:723 Computer Software, Data Handling and Applications - 723.2 Data Processing and Image Processing - 903.1 Information Sources and Analysis

DOI:10.1109/ICCSNT.2017.8343691

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 67>

Accession number:20182805544006

Title:CLEAN : An approach for detecting benign domain names based on passive DNS traffic

Authors:Han, Chunyu (1); Zhang, Yongzheng (1)

Author affiliation:(1) Department of Computer Science, School of Cyber Security, Institution of Information Engineering, Nankai University, University of Chinese Academy of Sciences, Chinese Academy of Sciences, Tianjin and Beijing, China

Corresponding author:Zhang, Yongzheng(zhangyongzheng@iie.ac.cn)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:343-346

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Domain name plays a crucial role on the Internet. Therefore, more and more malicious behavior had been conducted by using the domain name, such as spam, botnet, phishing and the like. Thus, lots of research have been done for detecting these malicious domain names. Nevertheless, the effort focused on benign domain names is little. It is obvious that finding more benign domain names accurately is very helpful for detecting malicious domain names. In this paper, we analyze a great number of domain names and propose a method, CLEAN(CLassifier of bEnign domAin Names), for discovering benign domain names from plenty of domain names on the passive DNS traffic. Eventually, we conducted the experiment to check the effect. The result showed the recall rate is 82.1% and accuracy rate is 92.2%.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Internet protocols

Controlled terms:Computer science - Computers

Uncontrolled terms:Accuracy rate - DNS traffics - Domain names - Malicious behavior - Phishing - Recall rate

Classification code:723 Computer Software, Data Handling and Applications

Numerical data indexing:Percentage 8.21e+01%, Percentage 9.22e+01%

DOI:10.1109/ICCSNT.2017.8343715

Funding Details: Number; Acronym; Sponsor: 61572496; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 68>

Accession number:20182805544397

Title:OSO: Mitigating data flooding attack in Wi-Fi offloading

Authors:Liu, Zhicheng (1); Zhang, Junxing (1)

Author affiliation:(1) College of Computer Science, Inner Mongolia University, Hohhot, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Publication year:2018

Pages:400-404

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In such an era that mobile devices produce ever-increasing amounts of data, Wi-Fi offloading enables mobile users to upload delay-tolerant data over Wi-Fi, which speeds up the upload but comes at constrained mobility and security threats. In this paper, we analyze the threats of data flooding attack in Wi-Fi offloading and propose an improved Wi-Fi offloading architecture to mitigate the impacts of such attack. Different from existing systems which store and forward data to the server, our architecture deploys control server in residential area network for the load balancing of offloading devices. Two experiments illustrate that our work can effectively improve the throughput and reduce the data delay under data flooding attack, compared with the generic architecture in a store-and-forward fashion.<br/> &copy; 2017 IEEE.

Number of references:17

Main heading:Wireless local area networks (WLAN)

Controlled terms:DOS - Floods - Mobile telecommunication systems - Network architecture

Uncontrolled terms:Data flooding attacks - Existing systems - Flooding attacks - Generic architecture - mitigation - Residential areas - Store and forward - Wi-Fi offloading

Classification code:722.4 Digital Computers and Systems

DOI:10.1109/ICCSNT.2017.8343727

Funding Details: Number; Acronym; Sponsor: 61261019; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 69>

Accession number:20182805544466

Title:Fuzzy self-Tuning control of PID parameters in SPMIG for aluminum alloy sheet

Authors:Tianfa, Liao (1); Jiaxiang, Xue (1)

Author affiliation:(1) School of Mechanical and Automotive Engineering, South China University of Technology, Guangzhou; 510640, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Pages:525-528

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:This paper firstly introduced the principle and technological method of fuzzy self-Tuning algorithm, and discussed related parameters and rules of the fuzzification, membership function, fuzzy rule and defuzzification in the fuzzy self-Tuning algorithm. Then, two kinds of PID control methods were compared by the Simulink simulation platform, and the result showed that the input adaptability and anti-interference ability of fuzzy self-Tuning controller of PID parameters were significantly better than those of fixed PID controller. Finally, the result was verified by the SPMIG welding test for aluminium alloy sheet with a thickness of 2mm, thus obtaining better welding effect.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Aluminum alloys

Controlled terms:Computer networks - Controllers - Fixed platforms - Fuzzy inference - Membership functions - Three term control systems - Welding

Uncontrolled terms:Aluminium-alloy sheets - Aluminum alloy sheet - Anti-interference - Defuzzifications - Fuzzy self tuning - Simulink simulations - SPMIG - Technological methods

Classification code:511.2 Oil Field Equipment - 538.2 Welding - 541.2 Aluminum Alloys - 721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 731.1 Control Systems - 732.1 Control Equipment - 921 Mathematics

Numerical data indexing:Size 2.00e-03m

DOI:10.1109/ICCSNT.2017.8343754

Database:Compendex

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<RECORD 70>

Accession number:20182805544945

Title:An intelligent fault diagnosis approach integrating cloud model and CBR

Authors:Gao, Junjie (1); Xiao, Wei (1); Xie, Yanan (1); Gu, Feng (1); Yao, Baozhen (1)

Author affiliation:(1) School of Automotive Engineering, Dalian University of Technology, Dalian, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Pages:294-298

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The study is dedicated to an intelligent fault diagnosis approach for vehicle maintenance which integrates both the cloud model and case-based reasoning (CBR). The cloud model is used to transform the uncertainty of the subjective quantitative information into qualitative values to calculate the case similarity, which greatly simplifies the input conditions in case retrieval and improves the operability of fault diagnosis. The improved Euclidean distance formula is taken as a measure of the similarity between the fault cases. Compared with the traditional method, it eliminates the similarity deviation and improves the accuracy of case retrieval. The case study of vehicle electrical and electronic equipment is reported, which can prove the approach proposed in this paper is correct and efficient.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Fault detection

Controlled terms:Automobile electronic equipment - Case based reasoning - Cloud computing - Computer networks - Failure analysis - Oscillators (electronic)

Uncontrolled terms:Casebased reasonings (CBR) - Cloud models - Electrical and electronic equipment - Intelligent fault diagnosis - Qualitative - Quantitative - Quantitative information - Vehicle maintenance

Classification code:662.4 Automobile and Smaller Vehicle Components - 713.2 Oscillators - 722.4 Digital Computers and Systems

DOI:10.1109/ICCSNT.2017.8343705

Database:Compendex

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<RECORD 71>

Accession number:20182805544274

Title:Double-Level Binary Tree Bayesian compressed sensing for block sparse image

Authors:Qian, Yongqing (1); Chen, Weizhen (1)

Author affiliation:(1) School of Electrical and Electronic Engineering, Wuhan Polytechnic University, Wuhan, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

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Pages:453-457

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Based on the fact that some image signals possess the block sparsity in practical application environment, a novel Compressed Sensing (CS) algorithm for block sparse image is proposed in this paper. Namely, a Double-level Binary Tree (DBT) Bayesian model is proposed for the block sparse image at the same time the relationship of the root node and the leaf node of this DBT structure is defined as 'genetic characteristic'. Then, the block clustering for the block sparse image can be executed successfully and effectively by utilizing Markov Chain Monte Carlo (MCMC) method. The simulation results prove that, our proposed method for the block sparse image signal can get better recovery results with less computation time.<br/> &copy; 2017 IEEE.

Number of references:17

Main heading:Image compression

Controlled terms:Bayesian networks - Binary trees - Compressed sensing - Computer networks - Markov processes - Monte Carlo methods - Query processing

Uncontrolled terms:Application environment - Bayesian compressed sensing - Block sparse - Block sparsities - Compressive sensing - Double level - Genetic characteristics - Markov chain Monte Carlo method

Classification code:716.1 Information Theory and Signal Processing - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory - 922.1 Probability Theory - 922.2 Mathematical Statistics

DOI:10.1109/ICCSNT.2017.8343738

Database:Compendex

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<RECORD 72>

Accession number:20182905548839

Title:Cross-lingual similar documents retrieval based on co-occurrence projection

Authors:Liu, Jiao (1); Cui, Rong-Yi (1); Zhao, Ya-Hui (1)

Author affiliation:(1) Department of Computer Science and Technology, Yanbian University, Yanji, Jilin, China

Corresponding author:Zhao, Ya-Hui(yhzhao@ybu.edu.cn)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In this paper, an approach to calculating the similarity among cross-lingual documents was researched for multilingual documents including Chinese, English, and Korean. Firstly, document was represented as a vector in the space of other language by co-occurrence projection. And then, taking advantage of the latent semantic analysis, the loss of vector caused by polysemy between different languages was remedied. Finally, the cross-lingual cosine similarity of documents was calculated in the same language space possessing equivalent semantic information. External dictionary and knowledge base were sidestepped by using the translation corpus to establish the lexical correspondence among Chinese, English, and Korean. The results show that co-occurrence projection has a great effect in calculating cross-lingual documents similarity, moreover, the retrieval accuracy of translation can be reached 95%, which verifies the effectiveness of the proposed method.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Information retrieval

Controlled terms:Computer networks - Knowledge based systems - Semantics - Translation (languages) - Vector spaces

Uncontrolled terms:Cross-lingual - Documents similarity - Latent Semantic Analysis - Multilingual documents - Retrieval accuracy - Semantic information - similar documents retrieval - Word co-occurrence

Classification code:723.4.1 Expert Systems - 903.1 Information Sources and Analysis - 903.3 Information Retrieval and Use - 921 Mathematics

Numerical data indexing:Percentage 9.50e+01%

DOI:10.1109/ICCSNT.2017.8343468

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 73>

Accession number:20182805544386

Title:An optimized AODV protocol based on clustering for WSNs

Authors:Feng, Yan (1); Zhang, Baihai (1); Chai, Senchun (1); Cui, Lingguo (1); Li, Qiao (2)

Author affiliation:(1) School of Automation, Beijing Institute of Technology, Beijing, China; (2) Langfang Campus, Nanjing Artillery Academy, Langfang, China

Corresponding author:Feng, Yan(fengyan0919@126.com)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Pages:410-414

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Ad Hoc On-Demand Distance Vector Routing Protocol (AODV) is one of the most common reactive protocols used in Mobile Ad Hoc Networks (MANET) which also has been used in wireless sensor networks (WSNs). In AODV protocol, the flooding mechanism is used to establish routes, which consumes much energy. In this paper, an enhancement in AODV for WSNs is proposed. We leverage clustering algorithm to control the flooding for establishing routes. This will save much energy and prolong the network lifetime. Furthermore, if the data need to be transmitted more than once, a shorter route should be figured out according to the established route. The approach for shorter route is also presented. Simulations have been carried out to test the efficiency of the proposed method.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Mobile ad hoc networks

Controlled terms:Clustering algorithms - Floods - Routers - Routing protocols - Sensor nodes - Wireless sensor networks

Uncontrolled terms:Ad hoc on demand distance vector routing protocols - AODV - AODV protocols - Flooding mechanism - Network lifetime - Node degree - Reactive protocols - Wireless sensor network (WSNs)

Classification code:722 Computer Systems and Equipment - 722.3 Data Communication, Equipment and Techniques - 723 Computer Software, Data Handling and Applications - 903.1 Information Sources and Analysis

DOI:10.1109/ICCSNT.2017.8343729

Funding Details: Number; Acronym; Sponsor: 61573061; NSFC; National Natural Science Foundation of China

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 74>

Accession number:20182805544000

Title:Organizing tactics based optimization theory

Authors:Xie, A.S. (1); Liu, D.X. (1)

Author affiliation:(1) China Institute for Small and Medium Enterprises, Zhejiang University of Technology, Hangzhou, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

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Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:This paper proposed a new general framework for intelligent optimization based on organizing tactics rather than probability rules. Compared with the existing intelligent optimization algorithms, like Particle Swarm Optimization, this framework has several significant advantages. First, the 'intelligence' does not depend on the probability rules of the operators, but their organizing tactics. Thus there are no probability equations that need to be updated, and involved control parameters are fewer, so it is easier to use in practice. Second, synergistic coexistence and automatic balance of the exploration and the exploitation are achieved in the running. Third, population diversity has been kept during the running. Fourth, most useless and ineffective repetitious operations are avoided, and thus the needed consumption of storage space and running time are lessened largely.<br/> &copy; 2017 IEEE.

Number of references:9

Main heading:Computer networks

Controlled terms:Computation theory - Evolutionary algorithms - Particle swarm optimization (PSO) - Probability - Site selection - Swarm intelligence

Uncontrolled terms:Control parameters - Intelligent optimization - Intelligent optimization algorithm - Optimization theory - Population diversity - Probability equations - Probability rules - Storage spaces

Classification code:721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 723 Computer Software, Data Handling and Applications - 922.1 Probability Theory

DOI:10.1109/ICCSNT.2017.8343702

Funding Details: Acronym; Sponsor: ZJUT; Zhejiang University of Technology

Database:Compendex

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<RECORD 75>

Accession number:20182805544809

Title:Fast detection of moving object based on improved frame-difference method

Authors:Zhu, Mingzhu (1); Wang, Hongbo (1)

Author affiliation:(1) State Key Lab. of Networking and Switching Technology, Beijing University of Posts and Telecommunications, Beijing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:299-303

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:It is difficult to detect the moving object in the video which is captured with the moving camera, and it costs a lot of time to use current method of object detection, because there is a large false rate based on the basic method of moving object detection. In this paper, we propose an improved frame-difference method, which can shorten the running time and improve the accuracy of the object detection. The results of the experiment show that after adding the improved frame-difference method, the detection speed is increased by 21.06 times, the image detection accuracy is improved about 8%. The algorithm is robust and it can be adapted to different scenes including indoor and outdoor. It could be applied to the field of artificial intelligence, such as Intelligent Driving, UAV aerial detection technology and so on.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Object detection

Controlled terms:Aircraft detection - Antennas - Artificial intelligence - Computer networks - Image enhancement - Object recognition

Uncontrolled terms:Aerial detection - Detection speed - Fast detections - Frame difference methods - Frame differences - Image detection - Moving-object detection - robust

Classification code:716.2 Radar Systems and Equipment - 723.2 Data Processing and Image Processing - 723.4 Artificial Intelligence

Numerical data indexing:Percentage 8.00e+00%

DOI:10.1109/ICCSNT.2017.8343706

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 76>

Accession number:20182805543920

Title:Research on clustering routing algorithm based on K-means++ for WSN

Authors:Yang, Xiang (1); Yan, Yu (2); Deng, Dengteng (2)

Author affiliation:(1) Guilin University of Technology, Bowen College of Management, Guilin, China; (2) School of Information Science and Engineering, Guilin University of Technology, Guilin, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Pages:330-333

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Clustering routing algorithm is frequently applied in Wireless Sensor Network, which has the characteristics of high efficiency and long life cycle. However, the randomness of choosing cluster head leads to uneven clustering and unbalanced energy consumption. The method of single-hop data transmission also increases the energy burden of the nodes. In order to address the above problems, an improved algorithm is proposed in this paper. In the clustering stage, the base station uses K-means++ algorithm to divide the cluster evenly, then the improved cluster head election formula is uesd to choose cluster head, finally, the shortest path is selected for inter-cluster transmission in the stage of data transmission. The simulation results show that the proposed algorithm is better than traditional clustering routing algorithm in prolonging life cycle of nodes and improving the life cycle of the network.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Clustering algorithms

Controlled terms:Data transfer - Energy utilization - Graph theory - Life cycle - Routing algorithms - Sensor nodes - Wireless sensor networks

Uncontrolled terms:Cluster-head elections - Clustering routing - K-means - Long life cycles - Shortest path - Traditional clustering - Unbalanced energy - uniform clustering

Classification code:525.3 Energy Utilization - 722 Computer Systems and Equipment - 722.3 Data Communication, Equipment and Techniques - 723 Computer Software, Data Handling and Applications - 903.1 Information Sources and Analysis - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI:10.1109/ICCSNT.2017.8343712

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 77>

Accession number:20182805544570

Title:Vehicle type recognition based on adaptive scaling window and masks

Authors:Mo, Wenying (1); Gao, Ying (1)

Author affiliation:(1) School of Computer Science and Educational Software, Guangzhou University, Guangzhou, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:425-428

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In recent years, more and more approaches were proposed for vehicle logo recognition. However, most of the approaches achieve high performance only when the images have high resolution and the number of vehicle type to be classified is few. In this paper, a novel algorithm is proposed to treat with various resolutions of vehicle images and recognize a large number of vehicle logos. This algorithm is based on adaptive scaling sliding window and template matching with screening masks that is applied to detect the most accurate size and feature position of the target logo. In order to solve the problem that complicated texture noise affects the accuracy of template matching seriously, different screening masks are utilized for different vehicles. The algorithm avoids the difficulties of features localization and can recognize a great number of vehicle logos. This algorithm is applied on a dataset comprised of 10000 vehicle images with 102 types of vehicle logos taken in different environment by different traffic cameras. Experiment results show an overall recognition ratio of 91.62%.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Template matching

Controlled terms:Computer networks - Vehicles

Uncontrolled terms:Adaptive scaling - High resolution - Novel algorithm - Number of vehicles - Recognition ratio - Sliding Window - Vehicle logo recognition - Vehicle type recognition

Classification code:723 Computer Software, Data Handling and Applications

Numerical data indexing:Percentage 9.16e+01%

DOI:10.1109/ICCSNT.2017.8343732

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 78>

Accession number:20182805544389

Title:A fault detection design for clustered space information network based on FTA

Authors:Sun, Yuanyuan (1, 2, 3); Wang, Yongming (1, 3); Guo, Lili (2); Ma, Zhongsong (2); Wang, Huiping (2)

Author affiliation:(1) School of Cyber Security, University of Chinese Academy of Sciences, Beijing, China; (2) Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, Key Laboratory of Space Utilization, Beijing, China; (3) Institution of Information Engineering, Chinese Academy of Sciences, Beijing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Issue date:April 19, 2018

Publication year:2018

Pages:389-394

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

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Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The backbone network of the Space Information Network (SIN) contains high orbit satellites, medium orbit satellites and low earth orbit satellites. The fault detection and diagnosis capability of backbone network is the key to the healthy operation of SIN. In this paper, we present a test model for fault detection of backbone network, adopting the way of clustering to classify satellites to different clusters for the convenience to manage the backbone network. Specially, each cluster has fixed topology. It is very handy for fault detection. We exploit FTA (fault tree analysis) to analyze the fault of SIN from a testing model of satellite backbone network. And by FTA analysis, a fault detection design of GEO/MEO/LEO network is proposed. It is practical and easy to implement in engineering.<br/> &copy; 2017 IEEE.

Number of references:9

Main heading:Fault detection

Controlled terms:Computer networks - Earth (planet) - Fault tree analysis - Information services - Orbits - Satellite communication systems - Satellites

Uncontrolled terms:Back-bone network - cluster - Fault detection and diagnosis - Fixed topologies - Low earth orbit satellites - Space information network - Test Modeling - Testing modeling

Classification code:655.2 Satellites - 655.2.1 Communication Satellites - 903.4 Information Services

DOI:10.1109/ICCSNT.2017.8343725

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 79>

Accession number:20182805544446

Title:LFM and FRFT to a novel FSK method

Authors:Qi, Shuai (1); Guo, Daoxing (1); Zhang, Bangning (1); Guo, Kefeng (1)

Author affiliation:(1) College of Communications Engineering, PLA Army Engineering University, Nanjing; 210007, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

ISBN-13:9781538604922

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Conference date:October 21, 2017 - October 22, 2017

Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:With cosine signal as carrier, the traditional Frequency shift keying (FSK) method achieves fast non-coherent demodulation by FFT. But as carrier, the cosine signal has the shortcomings of non-time-varying the signal, fixed frequency, anti-interference and poor security performance. Aiming at these problems, this paper presents a novel modulation and demodulation method, which achieves the fast incoherent demodulation with the linear frequency modulation (LFM) signal as carrier and Fractional Fourier Transform (FRFT). With LFM signal as carrier, that FRFT can be used to achieve rapid demodulation, has been shown in Theoretical analysis and simulation results. In addition, the LFM signal has good performance of anti-interference and confidentiality, compared with the traditional cosine signal as carrier, because it is a time-varying signal, whose time domain and the frequency domain are both changing.<br/> &copy; 2017 IEEE.

Number of references:9

Main heading:Time domain analysis

Controlled terms:Chirp modulation - Computer networks - Demodulation - Frequency domain analysis - Frequency shift keying - Mathematical transformations - Modulation - Optical variables measurement

Uncontrolled terms:Analysis and simulation - Coherent demodulation - Demodulation method - Fractional Fourier transforms - Frequency Shift Keying (FSK) - FRFT - Linear frequency modulation signal (LFM) - Security performance

Classification code:716 Telecommunication; Radar, Radio and Television - 921 Mathematics - 921.3 Mathematical Transformations - 941.4 Optical Variables Measurements

DOI:10.1109/ICCSNT.2017.8343743

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 80>

Accession number:20182805543914

Title:A 12 bits chipless RFID tag based on 'I-shaped' slot resonators

Authors:Xie, Keyi (1); Xue, Yanbing (1)

Author affiliation:(1) School of Electronics and Information Engineering, Dalian Jiaotong University, Dalian, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Publication year:2018

Pages:320-324

Language:English

ISBN-13:9781538604922

Document type:Conference article (CA)

Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In this paper, a 12 bits chipless tag is designed on a 42mm&lowast;20.5mm&lowast;0.5mm Arlon AD255A substrate. The tag is based on 12 'I-shaped' slot resonators. By removing or adding some slots, different codes are obtained. HFSS software is used in structure design and simulation. In order to reduce the mutual coupling between different resonators and have the compact size, the distance between two adjacent 'I-shaped' slots is designed to be 1mm, and the width of 'I-shaped' slot is 0.5mm. Low profile Ultra-Wide Band (UWB) Co-planar Waveguide (CPW) antennas are used in experiment instead of using expensive horn antennas. From simulation and experimental results, the chipless tag proposed in this paper is feasible and it has great potential in the field of Internet of things.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Ultra-wideband (UWB)

Controlled terms:Computer software - Horn antennas - Optical waveguides - Radio frequency identification (RFID) - Resonators

Uncontrolled terms:Chipless RFID - chipless tag - Compact size - HFSS software - Low-profile - Mutual coupling - Slot resonator - Structure design

Classification code:714.3 Waveguides - 716.3 Radio Systems and Equipment - 723 Computer Software, Data Handling and Applications

Numerical data indexing:Size 1.00e-03m, Size 5.00e-04m

DOI:10.1109/ICCSNT.2017.8343710

Funding Details: Number; Acronym; Sponsor: 61201092; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 61471080; NSFC; National Natural Science Foundation of China

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 81>

Accession number:20182905548864

Title:Optimizing effective fusion representation by particle swarm optimization algorithm for protein sub-nuclear location

Authors:Yue, Yaoting (1); Wang, Shunfang (1)

Author affiliation:(1) School of Information Science and Engineering, Yunnan University, Kunming; 650504, China

Corresponding author:Wang, Shunfang(wangsf-66@hotmail.com)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Language:English

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Feature representation contains the more plentiful information of original protein sequence, the more beneficial for protein sub-nuclear localization. Inspired by this idea, this paper proposed a novel two-feature integration method, whose fusion parameter was optimized via the particle swarm optimization algorithm (PSO), for obtaining a more effective representation. Therefore, a new fusion representation, called AACPSSM, would be formed by integrating two kinds of single feature expression, amino acid composition (AAC) and position specific scoring matrix (PSSM). Due to the high dimensional characteristics of protein data, kernel linear discriminant analysis (KLDA) was used to conduct the data dimension reduction. Last, to evaluate validity of our proposed approach, a benchmark dataset and KNN classifier were used to carry out the numerical experiments. And the final Jackknife test experimental results prove that our proposed fusion representation AACPSSM largely outperforms the single one, AAC and PSSM.<br/> &copy; 2017 IEEE.

Number of references:25

Main heading:Particle swarm optimization (PSO)

Controlled terms:Computer networks - Discriminant analysis - Parameter estimation - Proteins

Uncontrolled terms:AACPSSM - Amino acid compositions - Data dimension reduction - Feature representation - Kernel linear discriminant analyses (KLDA) - KLDA - Particle swarm optimization algorithm - Position specific scoring matrix

Classification code:723 Computer Software, Data Handling and Applications - 804.1 Organic Compounds - 922 Statistical Methods

DOI:10.1109/ICCSNT.2017.8343482

Funding Details: Number; Acronym; Sponsor: 11661081; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 82>

Accession number:20182805544500

Title:Hidden information recognition based on multitask convolution neural network

Authors:Liu, Jiawen (1); Yuan, Huimei (1); Li, Mingyang (1)

Author affiliation:(1) Information and Engineering College Capital Normal University, Beijing; 100048, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

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Pages:194-198

Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:With the continuous application of big data technology, machine learning is playing an increasingly important role in enterprise applications. User information, such as gender, age and educational level are the core factors for the research and application in the field of computer psychology, personalized search and social business promotion. This paper proposes a method for automatically inferring user information based on the search terms of users. We establish a multi task convolution neural network model based on word vectors. After the process of data cleaning, user search word segmentation, we use the word2vec to transform words into vector representation, and then build a multi task convolutional neural network model. This model is compared with other models based on word frequency, LDA methods. Experimental results show that our proposed multitasking based convolutional neural network approach works better than other methods.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Computer networks

Controlled terms:Big data - Convolution - Engineering education - Learning systems - Neural networks - Support vector machines

Uncontrolled terms:Big data technologies - Convolution neural network - Convolutional neural network - Enterprise applications - Personalized search - Research and application - User Portrait - Vector representations

Classification code:716.1 Information Theory and Signal Processing - 723 Computer Software, Data Handling and Applications - 723.2 Data Processing and Image Processing - 901.2 Education

DOI:10.1109/ICCSNT.2017.8343685

Database:Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

<RECORD 83>

Accession number:20182805543981

Title:An improved partition algorithm to find large itemsets in K-dimensional space

Authors:Zeng, Bin (1); Yao, Lu (1)

Author affiliation:(1) Department of Management Engineering, University of Naval Engineering, Wuhan, Hubei, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Abbreviated source title:Proc. Int. Conf. Comput. Sci. Netw. Technol., ICCSNT

Volume:2018-January

Part number:1 of 1

Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Pages:199-203

Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:It has been shown that the current partition algorithm suffers from generating a lot of candidate itemsets when the search range is large. Now an improvement algorithm is proposed to find the large itemsets in the database without the constraint of the maximal range. In the improved algorithm, 'divide and conquer' approach is used to recursively partition the whole Hadoop file until a disk bucket is reached. At that time, all the large itemsets can be found in a bucket and then two equal-sized partitions are merged. Finally, all the large itemsets in the Hadoop file can be found. The Hadoop file can be used to store the transactions containing the large items such that only the regions in processing are needed to be scanned, which reduces the unnecessary database scan. The experiment shows that the algorithm is better than the traditional algorithm. Also, sensitivity analysis on four parameters is analyzed.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Computer networks

Controlled terms:Data mining - Electronic commerce - Sensitivity analysis

Uncontrolled terms:Database scans - Dimensional spaces - Divide and conquer - Filesystem - Item sets - Partition algorithms - Search range

Classification code:723.2 Data Processing and Image Processing - 723.5 Computer Applications - 921 Mathematics

DOI:10.1109/ICCSNT.2017.8343686

Database:Compendex

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<RECORD 84>

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Title:CODDULM: An approach for detecting C&amp;C domains of DGA on passive DNS traffic

Authors:Han, Chunyu (1); Zhang, Yongzheng (1)

Author affiliation:(1) Department of Computer Science, School of Cyber Security, Institution of Information Engineering, Nankai University, University of Chinese Academy of Sciences, Chinese Academy of Sciences, Tianjin and Beijing, China

Corresponding author:Zhang, Yongzheng(zhangyongzheng@iie.ac.cn)

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Conference name:6th International Conference on Computer Science and Network Technology, ICCSNT 2017

Conference date:October 21, 2017 - October 22, 2017

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Domain plays an important role as one of the components on the Internet, so more and more malicious behavior has been conducted by using domains, such as spam, botnet, phishing and the like. DGA (Domain Generation Algorithm), one kind of DNS technology, has been used by domain-flux commonly in botnets. In this paper, we propose a method called CODDULM (C&amp;c domains Of Dga Detection Using Lexical feature and sparse Matrix). Firstly, it finds the NXDomains (Non-existent domains) on the passive DNS traffic to locate the suspicious infected hosts. Secondly, it selects DGA domains by lexical features according to suspicious infected hosts. Lastly, it discovers DGA C&amp;C (Command and Control) domains through SVM (Support Vector Machine algorithm) classifier. At the end of this paper, we conduct the experiment to verify the effect of the method and the high accuracy of it.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Internet protocols

Controlled terms:Botnet - Command and control systems - Support vector machines

Uncontrolled terms:Command and control - DNS traffics - domain - Generation algorithm - Lexical features - Malicious behavior - Sparse matrices - Support vector machine algorithm

Classification code:723 Computer Software, Data Handling and Applications - 731.1 Control Systems

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<RECORD 85>

Accession number:20182905548891

Title:A study of algorithms for traveling segment sequences based on convex chain

Authors:Lijuan, Wang (1); Hongfeng, Hou (1); Changan, Xu (3); Bo, Jiang (2); Tao, Ning (2)

Author affiliation:(1) School of Information and Science, Dalian Institute of Science and Technology, Dalian, China; (2) College of Information Science and Technology, Dalian Maritime University, Dalian, China; (3) Institute of Software, Dalian Jiaotong University, Dalian, China

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In this paper, the problem of traveling disjoint segment sequences in the plane will be studied. The goal is to find the shortest path from the start point, then visiting each segment in the given order, and finally to the target point. By adopting the techniques of division of convex chain, combination optimization and binary search tree, we design a fast algorithm with the O(nlog<sup>2</sup>n) time complexity to solve it, denoted by BST algorithm, where n is the total number of all segments, and we introduce the main techniques used in this paper in detail. Furthermore, we generate a large amount of test data to test BST algorithm, and compare the efficiency of BST algorithm and Rubber-band algorithm, which is the better solution to this problem. The results show that BST algorithm is superior to Rubber-band algorithm, and it is the optimal algorithm for visiting the disjoint segment sequences so far.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Trees (mathematics)

Controlled terms:Binary trees - Chains - Computer networks - Forestry - Rubber

Uncontrolled terms:Binary search trees - Combination optimization - Disjoint segments - Fast algorithms - Optimal algorithm - Rubber bands - segment sequences - Time complexity

Classification code:602.1 Mechanical Drives - 818.1 Natural Rubber - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI:10.1109/ICCSNT.2017.8343479

Database:Compendex

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Accession number:20182805544465

Title:Estimating the number of multiple jamming attackers in Vehicular Ad Hoc Network

Authors:Pang, Liang (1); Guo, Pengze (1); Chen, Xiao (1); Li, Jiabin (1); Xue, Zhi (1)

Author affiliation:(1) School of Electronic Information and Electrical Engineering, Shanghai Jiaotong University, Shanghai, China

Corresponding author:Pang, Liang(cyclone0000@163.com)

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In Vehicular Ad Hoc Network (VANET), due to the openness of wireless medium and the city-wide applied region, wireless communications are vulnerable to malicious multiple jamming attackers. Such jamming attack can seriously disable the preset functions of VANET. Jammer localization method is proposed to eliminate the attacker recently. However, it becomes invalid when there are multiple attackers. To address this issue, we propose a novel method to determine the attacker number and classify the corresponding data set. Our proposed method first uses the moving features of vehicles and spatial features of jammers as basis to divide the data set into several point sets. Then, the method uses the distribution of no-jammed points to group the point sets. And the result is accordingly obtained through this process. The simulation results show that our proposed method is effective and has many advantages compared to the traditional method.<br/> &copy; 2017 IEEE.

Number of references:16

Main heading:Vehicular ad hoc networks

Controlled terms:Classification (of information) - Geometry - Jamming - Wireless telecommunication systems

Uncontrolled terms:Clustering - Determine the attacker number - Jamming attacks - Localization method - Multiple jamming attackers - Spatial features - Wireless communications - Wireless medium

Classification code:711 Electromagnetic Waves - 716.1 Information Theory and Signal Processing - 723 Computer Software, Data Handling and Applications - 921 Mathematics

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Funding Details: Number; Acronym; Sponsor: 61864068; NSFC; National Natural Science Foundation of China

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<RECORD 87>

Accession number:20182805544552

Title:Hasse diagram based algorithm for continuous temporal subgraph query in graph stream

Authors:Sun, Xiaoli (1); Tan, Yusong (1); Wu, Qingbo (1); Wang, Jing (1)

Author affiliation:(1) College of Computer, National University of Defense Technology, Changsha, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Continuous subgraph pattern matching is an extension of the traditional subgraph pattern matching and becoming a subject that attracts increasing interest. It requires the near real-Time responses and is used in many applications, for example, abnormal monitoring in social networks, cyber attacks monitoring in cyber networks. As the dynamic graph changes with time, the temporal subgraph pattern (i.e., the edges have temporal relation) is considered. In this paper, the Hasse diagram is introduced to represent the temporal relation of the query graph. Then we design the Hasse-cache structure, and propose a continuous temporal subgraph pattern matching algorithm based on the Hasse diagram. The algorithm uses the probability of dynamic graph to reduce the intermediate results, and can implement the matching of topology and the verification of temporal relation simultaneously. Our experiments with real-world datasets show that the proposed algorithm has 10x speedups over the previous approaches.<br/> &copy; 2017 IEEE.

Number of references:17

Main heading:Computer crime

Controlled terms:Computer networks - Graphic methods - Network security - Pattern matching - Topology

Uncontrolled terms:Continuous queries - Graph stream - Hasse diagrams - Intermediate results - Pattern matching algorithms - Real-world datasets - Subgraphs - Temporal relation

Classification code:723 Computer Software, Data Handling and Applications - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI:10.1109/ICCSNT.2017.8343695

Database:Compendex

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<RECORD 88>

Accession number:20182805544489

Title:Data acquisition and researches based on radar echo navigation information technology

Authors:Zhang, Hanguang (1); Bi, Jin (1); Li, Jietao (1); Ma, Ke (1)

Author affiliation:(1) Xi'An Electronic Engineering Research Institute, Xi'an, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In order to probe into the data acquisition method of radar echo navigation information technology, the radar unit constitution, the compression principle of sampling data of Lempel-Ziv-Welch (LZW) algorithm and two common compression algorithms are introduced. The influence of network transmission speed on radar echo data acquisition in VxWorks system is also studied. The flow chart of the compression implementation and the network transmission speed comparison diagram are analyzed. The experimental results show that the LZW compression algorithm can achieve a satisfactory compression rate when the radar echo navigation data acquisition is carried out. At the same time, users can use the memory file in VxWorks to read and write, which can speed up the network transmission. Based on the above finding, it is concluded that the data acquisition and research based on radar echo navigation information technology can speed up the network transmission by using the VxWorks system.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Data communication systems

Controlled terms:Computer networks - Data acquisition - Navigation - Radar - Speed

Uncontrolled terms:Compression algorithms - Compression rates - LZW algorithms - Navigation in formation - Network transmission - Radar echoes - Radar units - Sampling data

Classification code:716.2 Radar Systems and Equipment - 723.2 Data Processing and Image Processing

DOI:10.1109/ICCSNT.2017.8343687

Database:Compendex

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<RECORD 89>

Accession number:20182805544311

Title:Analysis of bridge deformations using real-Time BDS measurements

Authors:Xi, Ruijie (1); Chen, Qusen (1); Xi, Ruijie (2); Meng, Xiaolin (3); Jiang, Weiping (3)

Author affiliation:(1) School of Geodesy and Geomatics, Wuhan University, Wuhan, China; (2) Nottingham Geospatial Institute, University of Nottingham, Nottingham, United Kingdom; (3) GNSS Research Center, Wuhan University, Wuhan, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In this paper, we analysed the performance of real-Time BDS monitoring system to determine the deformations and vibration of a cable-stayed bridge in Wuhan, China. Two experiments were carried out using reference stations at 2 km to the middle span of the bridge, and the monitoring points placed on the top of the tower, directly at the middle span of the bridge and at the bridge pier. Based on these sites, the precision of BDS deformation monitoring can be assessed and the structural vibration monitoring effect can also be analysed. The experiments demonstrate that, the precision of BDS-based deformation monitoring can be comparable with GPS, and the modal frequency of the bridge obtained by BDS vibration test is very close to the design value. The paper concludes that BDS is capable of providing high precision deflection and accurate modal frequency information in real-Time bridge deformation monitoring.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Vibration analysis

Controlled terms:Bridges - Cable stayed bridges - Computer networks - Deformation - Monitoring - Structural dynamics

Uncontrolled terms:Bridge deformation monitoring - Deformation monitoring - Modal frequency - Monitoring points - Monitoring system - Real time deformations - Reference stations - Structural vibrations

Classification code:401.1 Bridges - 408 Structural Design

DOI:10.1109/ICCSNT.2017.8343756

Funding Details: Number; Acronym; Sponsor: 41210006; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 41304007; NSFC; National Natural Science Foundation of China - Number; Acronym; Sponsor: 41525014; NSFC; National Natural Science Foundation of China

Database:Compendex

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<RECORD 90>

Accession number:20182805544557

Title:Generalized predictive control and delay compensation for high-Speed EMU network control system

Authors:Zhang, Tong (1); Li, Chang-Xian (1); Li, Zong-Liang (2)

Author affiliation:(1) School of EMU Application and Maintenance Engineering, Dalian Jiao Tong University, Dalian, China; (2) School of Electrical Information, Dalian Jiao Tong University, Dalian, China

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Language:English

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Train communication network has become the application mainstream of EMU and urban rail traffic operation. However, practical problems such as transmission delay and packet loss of communication network can cause a significant threat to the train stability and operation safety. In this paper, the delay of the train communication network was studied and controlled, and the experimental platform was built to test and analyze the forward delay transmission characteristics of the train network. The self-Adaptive prediction was achieved by using the autoregressive model. At the same time, the generalized predictive control method was designed to realize the control and delay compensation of the system. On the experimental platform, joint simulation method was used with the configuration software. The results showed that the proposed method is superior to the PID control, which can meet the real time control requirements of the high speed EMU operation process.<br/> &copy; 2017 IEEE.

Number of references:9

Main heading:Delay control systems

Controlled terms:Computer networks - Computer software - Predictive control systems - Railroad transportation - Real time control - Three term control systems - Time delay

Uncontrolled terms:Auto regressive models - Configuration software - Experimental platform - Generalized predictive control - Generalized predictive control methods - Network control systems - Train communication network - Transmission characteristics

Classification code:433.1 Railroad Transportation, General - 713 Electronic Circuits - 723 Computer Software, Data Handling and Applications - 731 Automatic Control Principles and Applications - 731.1 Control Systems

DOI:10.1109/ICCSNT.2017.8343751

Database:Compendex

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<RECORD 91>

Accession number:20182805544176

Title:A Chinese short text semantic similarity computation model based on stop words and TongyiciCilin

Authors:Shancheng, Tang (1); Yunyue, Bai (1); Fuyu, Ma (1)

Author affiliation:(1) Communication and Information Institute, Xi'An University of Science and Technology, Xi'an, China

Corresponding author:Shancheng, Tang(tangshancheng@21cn.com)

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Short text similarity computing plays an important role in natural language processing, and it can be applied to many tasks. In recent years, there are lots of researches getting important results on natural language processing. Although there are some good results in English, there is no major breakthrough in Chinese. Different from the proposed methods, we reserve the Stop words in the training dataset of word vector for Chinese characteristics, and add the TongyiciCilin to the training data of the short text semantic similarity computation model. We compared the effect of Word2vec and Glove methods in our model. We use the Chinese short text semantic similarity dataset which is designed by Chinese grammar experts. The results show that the accuracy of the model is improved by 2%-3% by retaining Stop words in word vector training data and adding TongyiciCilin to training data. The accuracy of our model is better than Baidu short text similarity calculation platform on the same testing dataset.<br/> &copy; 2017 IEEE.

Number of references:35

Main heading:Natural language processing systems

Controlled terms:Computation theory - Computer networks - Semantics - Statistical tests

Uncontrolled terms:Chinese - Chinese characteristics - Chinese short-text - Semantic similarity - Stop word - TongyiciCilin - Training data - Training dataset

Classification code:721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 723.2 Data Processing and Image Processing - 922.2 Mathematical Statistics

Numerical data indexing:Percentage 2.00e+00% to 3.00e+00%

DOI:10.1109/ICCSNT.2017.8343708

Database:Compendex

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<RECORD 92>

Accession number:20182805544326

Title:TGCEL: A Chinese entity linking method based on topic relation graph

Authors:Chen, Yi (1); Tan, Yusong (1); Wu, Qingbo (1); Wang, Wei (1)

Author affiliation:(1) School of Computer, National University of Defense Technology, Chang Sha, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Entity linking has an important basic research value for Natural Language Processing, the task of which is to link different entity mentions in the given text with their referent entities in a knowledge base. And it is widely used in such fields as expanding knowledge base, Q&amp;A system, machine translation. We propose a Chinese collective entity linking algorithm based on the extracted topic features. We construct the topic relation graph of ambiguous entities in the same text, extract the topic characteristics from the multiple topic models, calculate the topic relevance, and select the topic subgraph with maximum score to reason and realize the batch linking. We experiment with both the news test corpus and the microblog test corpus, compare the performance of the adopted topic model, and analyze their applicable scene. When compared with the traditional algorithm, the maximum performance of our algorithm is improved by about 9% in microblog corpus and over 15% in news corpus, which indicates that our algorithm is potentially effective.<br/> &copy; 2017 IEEE.

Number of references:17

Main heading:Data mining

Controlled terms:Computer networks - Knowledge based systems - Linguistics - Natural language processing systems

Uncontrolled terms:collective entity linking - Entity disambiguation - Knowledge base - Linking algorithms - Machine translations - topic consistency - topic relation graph - Topic relevance

Classification code:723.2 Data Processing and Image Processing - 723.4.1 Expert Systems

Numerical data indexing:Percentage 1.50e+01%, Percentage 9.00e+00%

DOI:10.1109/ICCSNT.2017.8343692

Database:Compendex

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<RECORD 93>

Accession number:20182805544287

Title:Discovering latent spatial structured patterns using graph models for scene classification

Authors:Fan, Yuhua (1)

Author affiliation:(1) School of Mathematics Science, Liaocheng University, Liaocheng, China

Corresponding author:Fan, Yuhua(xiaotianshifyh@126.com)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Despite progress in scene recognition tasks such as image classification and attribute detection, computers still be difficult to understand the scenes as a whole. Existing methods often ignore global spatial constructed pattern among different local semantic objects. This paper propose a method for discovering the Latent spatial structured patterns to describe the visual semantic characters of images to improve the performance of scene recognition tasks. Unlike the existing approaches that mainly rely on the discriminant visual feature cues, we learn the latent spatial structured pattern to model the interaction relationships by using the graph models, which consider semantics and their localization information. We first train the pLSA models to obtain the latent semantic topics. Then we construct the graph models to discover the latent spatial structure patterns with combing the character vector and localization cues. Meanwhile, we treat the edge in model as link-Affinity matrix to describe the interaction relationships between semantics. The extensive experiments on public datasets have demonstrated that the suggested method can significantly boost the performance of scene classification tasks.<br/> &copy; 2017 IEEE.

Number of references:20

Main heading:Classification (of information)

Controlled terms:Computer networks - Graph theory - Image enhancement - Semantics

Uncontrolled terms:Attribute detections - Character vectors - Interaction relationship - Localization information - Scene classification - Scene recognition - Spatial structure - Structured patterns

Classification code:716.1 Information Theory and Signal Processing - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI:10.1109/ICCSNT.2017.8343745

Database:Compendex

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<RECORD 94>

Accession number:20182805544149

Title:Structural healthcare services for multi-users based on spectrum sharing strategy

Authors:Yi, Zhang (1); Shan, Zhu (1); Hong-Xin, Liu (1); Cheng, Chen (1); Zhu-Juan, Wang (2)

Author affiliation:(1) Wuhan Textile University, Sch of Elec and Electrical Engineering, HuBei, Wu Han, China; (2) WH Res Inst of Post and Tele, HuBei, China

Corresponding author:Yi, Zhang(yzhanghust@wtu.edu.cn)

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Over the last few years, research on the application of wireless networks for structural long-term healthcare services has attracted increasing attention. Electronic-healthcare and mobile-healthcare are the transfer of health resources and health care by information means. And the area of modern healthcare is developed by communications technology. The large volume of data from electronic-healthcare and mobile-healthcare networks will be generated with increase of population and healthcare service demands (e.g., real-time monitoring by video or audio, different type of personal healthcare information). However, healthcare applications usually occupy the fixed bandwidth that results in low service capacity. This makes the challenge of how best to design wireless health system. In this work, we design an effective way to improve availability of service and the patients' satisfaction by opportunistically accessing and spectrum sharing. The numerical results show that the approach can improve quality of service and capacity of healthcare system effectively.<br/> &copy; 2017 IEEE.

Number of references:12

Main heading:Health care

Controlled terms:Body sensor networks - Electronic document exchange - Population statistics - Quality of service - Wearable technology

Uncontrolled terms:access strategy - Electronic health record - emergency assistance - Wearable ecg sensors - Wireless body area network - Wireless healthcares

Classification code:461.7 Health Care - 722.3 Data Communication, Equipment and Techniques - 723.5 Computer Applications

DOI:10.1109/ICCSNT.2017.8343717

Database:Compendex

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<RECORD 95>

Accession number:20182805543614

Title:Research on tariff recovery risks assessment method based on electrical user portrait technology

Authors:Wang, Tao (1); Hu, Jianjun (1); Li, Chunfang (1); Zhang, Zhixian (2)

Author affiliation:(1) State Grid Yinchuan Power Supply Company, Yinchuan, Ningxia Hui Autonomous Region, China; (2) Shanghai Jiaotong Power Technology Co. Ltd, Pudong, Shanghai City, China

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Tariff recovery risks of electrical users are always big problems for electric power company, and the user portrait technology can realize tariff recovery risks assessment and defense by analyzing user power consumption, payment and arrears data from electricity information acquisition system and marketing system. This paper studies the multi-source data fusion and clean technology to handle power consumption, payment and arrears data. On this basis, the electrical user label system is established, the scene design of tariff recovery risks assessment is realized, and the C4.5 algorithm is used to evaluate the risks of tariff recovery. The analysis results of test case show that the model and algorithm proposed in this paper have high availability and accuracy, and can provide the references for electric power company to reduce the risk of tariff recovery.<br/> &copy; 2017 IEEE.

Number of references:15

Main heading:Risk assessment

Controlled terms:Big data - Computer networks - Computer system recovery - Data fusion - Data mining - Decision trees - Electric power utilization - Electric utilities - Marketing - Recovery - Trees (mathematics)

Uncontrolled terms:Clean technologies - Decision-tree algorithm - Electric power company - High availability - Information acquisition system - Model and algorithms - Risks assessments - user portrait

Classification code:706.1 Electric Power Systems - 723.2 Data Processing and Image Processing - 911.4 Marketing - 914.1 Accidents and Accident Prevention - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI:10.1109/ICCSNT.2017.8343690

Database:Compendex

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<RECORD 96>

Accession number:20182805546005

Title:Research on fault warning of AC filter in converter station based on RBF neural network

Authors:Shi, Lei (1); Zhang, Shenxi (2); Li, Junhong (1); Wei, Peng (1); Liu, Zhiyuan (1); Zhang, Zhixian (3)

Author affiliation:(1) State Grid Ningxia Power Corporation Maintenance Company, Yinchuan, China; (2) Department of Electrical Engineering, Shanghai Jiao Tong University, Shanghai, China; (3) Shanghai Jiaotong Power Technology Co., Ltd, Shanghai, China

Corresponding author:Zhang, Shenxi(willzsx@163.com)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Issue title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:AC filter in converter station is an important part of HVDC transmission system, and the tripping accident of AC filter will directly affect the transmission power of the DC transmission system. This paper presents a method for on-line identification of AC filter's health status based on the opening/closing current of AC filter's breaker. Firstly, a series of time domain feature and frequency domain feature of the opening/closing current of AC filter's breaker are defined. On this basis, radial basis function (RBF) neural network-based artificial intelligence method is used to identify the fault warning of AC filter. The results of an actual converter station show that the proposed method has high fault warning accuracy. It can alert staff to check and maintain AC filter before the abnormal status enlarges or causes adverse effects, and the occurrence of AC filter's tripping phenomenon can be reduced a lot.<br/> &copy; 2017 IEEE.

Number of references:15

Main heading:Computer networks

Controlled terms:Electric power transmission - Frequency domain analysis - Radial basis function networks - Time domain analysis

Uncontrolled terms:AC filters - Artificial intelligence methods - Converter station - DC transmission systems - feature - HVDC transmission system - Radial basis function neural networks - RBF Neural Network

Classification code:706.1.1 Electric Power Transmission - 921 Mathematics - 921.3 Mathematical Transformations

DOI:10.1109/ICCSNT.2017.8343707

Database:Compendex

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<RECORD 97>

Accession number:20182905547058

Title:Research on cross-platform unified resource access control management system

Authors:Wang, Xiaogang (1, 2); Yin, Zhenhua (3)

Author affiliation:(1) School of Computer Science and Engineering, Southeast University, Nanjing, China; (2) Changzhou College of Information Technology, Changzhou, China; (3) Research and Development Department, IFLYTEK Suzhou Education Technology Co. Ltd., Suzhou, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Existing information systems often involve variety of application modules deployed on different platforms including cloud computing, mobile computing. The single sign-on (SSO) mechanism is usually exploited for user login and access control to achieve unified management and authorization. However, existing SSO can only control users' access to main coarse-grained resources of each application module. It is incapable of controlling authorized users' access to fine-grained data of specific application modules. This paper therefore introduced the cross-platform unified resource access control system (CURAC) based on URI of various resources, which includes resource-based authentication and data-based authentication mechanisms for controlling users' access to both coarse-grained resources like web pages or data tables and fine-grained data resources like column fields of a data table. Such resources are usually deployed on different platforms. Creative development and extensive deployment practices show that our cross-platform unified resource access control system (CURAC) can effectively control the access to various resources of application systems on different application platforms.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Distributed computer systems

Controlled terms:Access control - Authentication - Computer networks - Control systems - Websites

Uncontrolled terms:Application platforms - Application systems - Authentication mechanisms - Creative development - Cross-platform - Resource access control - Resource-based - unified resource

Classification code:722.4 Digital Computers and Systems - 723 Computer Software, Data Handling and Applications - 731.1 Control Systems

DOI:10.1109/ICCSNT.2017.8343666

Database:Compendex

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<RECORD 98>

Accession number:20182905548862

Title:Framework and practice of integrated coastal zone management based on 3D earth model

Authors:Liu, Jian (1); Fan, Xiangtao (1); Xue, Zhuxin (1); Tan, Qingquan (2)

Author affiliation:(1) Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China; (2) Earthquake Disaster Prevention Center, Beijing Earthquake Agency, Beijing, China

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Volume:2018-January

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In this paper, an integrated coastal zone management system is achieved based on GIS technology, database technology and virtual reality technology. The system provides basic functions of data organization, data representation, query and retrieval for the coastal zone management, as well as decision-making basis for further marine environment detection, protection and area planning. The system integrates a variety of databases, to achieve the visualization of sea data management, so that information query and access are more intuitive. Marine function zoning management, analysis of coastline evolution and simulation of sea level rising are taken as three typical examples to introduce the applications of 3D coastal zone management system. The result shows that coastal zone management system makes the management of sea area more intuitive and standardized.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Decision making

Controlled terms:Coastal engineering - Coastal zones - Computer networks - Data visualization - Information management - Marine applications - Query processing - Regional planning - Sea level - Search engines - Virtual reality

Uncontrolled terms:Coastal zone management - Data representations - Database technology - Earth models - Information query - Integrated coastal zone management - Marine environment - Virtual reality technology

Classification code:403.2 Regional Planning and Development - 407.3 Coastal Engineering - 471 Marine Science and Oceanography - 471.1 Oceanography, General - 723 Computer Software, Data Handling and Applications - 912.2 Management

DOI:10.1109/ICCSNT.2017.8343477

Database:Compendex

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<RECORD 99>

Accession number:20182905546926

Title:Research on persistent memory file system optimization

Authors:Zhang, Jianquan (1); Feng, Dan (1); Liu, Jingning (1); Yan, Lei (1); Zhang, Zheng (1)

Author affiliation:(1) School of Computer Science and Technology, Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology, Wuhan; 00712, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

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Issue date:April 19, 2018

Publication year:2018

Pages:132-142

Language:English

ISBN-13:9781538604922

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Emerging byte-Addressable non-volatile memory offers high performance as DRAM and data persistency like disks. In order to use the NVM in a reasonable manner, existing storage systems put the NVM on memory bus and design a specialized file system to take advantage of the characteristics of NVM. However, the current NVM-based file systems use the page table to provide direct access in NVM, which cause performance overhead in page fault. In this paper, to address this issue, we propose a unified mapping structure based memory-mapped file system. It combines the advantages of memory page table and file data index, and uses the page table structure based data index as the unified address structure. By using this method, we can efficiently implement the mapping and release of resources, also, we can effectively reduce the overhead of page fault. By using the memory simulator, we evaluate our file system in various workloads. Evaluation results show that, our unified mapping structure based memory-mapped file system effectively improves the access performance and reduces space overhead during the accessing process.<br/> &copy; 2017 IEEE.

Number of references:30

Main heading:Dynamic random access storage

Controlled terms:Computer networks - Cost reduction - File organization - Mapping

Uncontrolled terms:Data persistency - Evaluation results - File systems - Mapping structures - Memory-Mapped file - MUFS - Non-volatile memory - Persistent memory

Classification code:405.3 Surveying - 722.1 Data Storage, Equipment and Techniques - 903.3 Information Retrieval and Use

DOI:10.1109/ICCSNT.2017.8343673

Database:Compendex

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<RECORD 100>

Accession number:20182905546992

Title:Study on software part of ultrasonic ranging system based on variable emission wavelength

Authors:Tai, Hong Li (1); Zhang, Huan (1); Yang, Song (1)

Author affiliation:(1) Sichuan Staff University of Science and Technology, Chengdu, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

Part number:1 of 1

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Language:English

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Document type:Conference article (CA)

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:At present, ultrasonic technology is widely used in measurement, automobile, medical, chemical industry, aerospace, machinery, exploration, biology, food and other fields, especially in the detection distance. The reason why autonomous mobile robots can move autonomously is that there is obstacle avoidance or positioning system in the robot system. The robot uses ultrasonic technology in detecting the distance of obstacles. In view of this, this paper introduces a fully integrated high-speed, high-performance hybrid signal processing system MCU, which controls receiver and transceiver ultrasonic range finder. In this paper, the design scheme of software system for ultrasonic range finder is expounded in detail, and the solution for the blind area of ultrasonic is given. Finally, the rangefinder is mounted on the robot for practical testing. The test data show that the Ultrasonic distance measurement finder described in this paper has good ranging performance, and it can meet the requirements of robot rangefinder.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Ultrasonic applications

Controlled terms:Chemical detection - Chemical industry - Computer networks - Machinery - Microcontrollers - Radar equipment - Radio transceivers - Robots - Signal processing

Uncontrolled terms:Autonomous Mobile Robot - Blind area - Hybrid signal processing - Temperature compensation - Ultrasonic distance measurements - Ultrasonic range finders - Ultrasonic ranging system - Ultrasonic technology

Classification code:716 Telecommunication; Radar, Radio and Television - 731.5 Robotics - 753.3 Ultrasonic Applications - 801 Chemistry - 805 Chemical Engineering, General

DOI:10.1109/ICCSNT.2017.8343676

Database:Compendex

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<RECORD 101>

Accession number:20182805544072

Title:Research on warehouse management system based on association rules

Authors:Chen, Zhimin (1); Song, Wei (1); Liu, Lizhen (1); Du, Chao (1)

Author affiliation:(1) School of Information Engineering, Capital Normal University, Beijing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Language:English

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Warehouse management is important for the development of enterprises. A good warehouse management system can enable enterprises to operate solid foundation. Using the method of manual records of data to manage enterprise warehouses has been unable to meet the current development needs of warehouse management. In this paper, we apply the Apriori algorithm to the warehouse management system. And we use the Apriori algorithm of data mining to analyze the records of the amount of goods in the warehouse, and the association rules between the goods are obtained. According to the association rules obtained by the system, the system can analyze the amount of the goods involved in the association rules. If the amount of goods is less than the minimum inventory or less than half of the maximum inventory, the system will recommend the names of goods that need to be purchased at the same time for the procurement staff. The method proposed by us can help procurement staff save time, and it can also reduce the influence of the shortage of goods for sales.<br/> &copy; 2017 IEEE.

Number of references:16

Main heading:Warehouses

Controlled terms:Association rules - Computer networks - Data mining - Industrial management - Learning algorithms

Uncontrolled terms:Apriori algorithms - Development needs - Warehouse management - Warehouse management systems

Classification code:694.4 Storage - 723.2 Data Processing and Image Processing - 903.1 Information Sources and Analysis - 912.2 Management

DOI:10.1109/ICCSNT.2017.8343688

Database:Compendex

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<RECORD 102>

Accession number:20182805544344

Title:User in the loop: QoE-oriented optimization in communication and networks

Authors:Du, Zhiyong (1); Liu, Dong (1); Yin, Lijie (2)

Author affiliation:(1) National University of Defense Technology, Changsha, China; (2) Nanjing Institute of Tourism and Hospitality, Nanjing, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Volume:2018-January

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Improving users' quality of experience (QoE) has become a consensus in wireless communications. Although the wireless network technology keeps evolving from 3G to 4G and the foreseeable 5G, QoE assurance in service provisioning is still a challenging task, partly due to the complicated mechanism in optimizing QoE. In this paper, we present a concept of QoE-oriented optimization for resource allocation and network configuration (RA-NC) in communications and networks. The QoE-oriented optimization is not a simple change in optimization goal from QoS to QoE of traditional QoS-oriented optimization, but a systematic rethink on the impacts of QoE on RA-NC problem. First, we introduce the main idea of QoE-oriented optimization from the perspective of RA-NC optimization modeling. Then, detailed principles, requirements and challenges are explained for QoE-oriented optimization. Finally, we envision an end-to-end QoE optimization framework, where the smartphone explores real-time users' QoE feedback data captured by sensors to improve user's QoE in an online, model-freed manner.<br/> &copy; 2017 IEEE.

Number of references:14

Main heading:Quality of service

Controlled terms:5G mobile communication systems - Mobile telecommunication systems - Resource allocation - Wireless telecommunication systems

Uncontrolled terms:Network configuration - Optimization framework - Optimization goals - Optimization modeling - Quality of experience (QoE) - Service provisioning - Wireless communications - Wireless network technologies

Classification code:912.2 Management

DOI:10.1109/ICCSNT.2017.8343731

Database:Compendex

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<RECORD 103>

Accession number:20182805544354

Title:Palmprint recognition based on CNN and local coding features

Authors:Yang, Aoqi (1); Zhang, Jianxin (1); Sun, Qiule (1, 2); Zhang, Qiang (1, 2)

Author affiliation:(1) Key Lab of Advanced Design and Intelligent Computing, Ministry of Education, Dalian University, Dalian, China; (2) Faculty of Electronic Information and Electric Engineering, Dalian University of Technology, Dalian, China

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Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The convolutional neural network(CNN) has received an excellent performance in the recent tasks of image retrieval and image classification. Besides, some local coding methods have been focused on because of their outstanding local description. In this paper, we present a novel method for palmprint recognition, which combines CNN and local coding techniques. We conduct feature extraction on palmprint images using the pre-trained networks and obtain the local convolutional features. Then three different local coding methods are adopted to code the features from CNN, including Bag of Visual Word(BoVW), Locality-constrained Linear Coding(LLC) and Vector of Locally Aggregated Descriptors (VLAD). The features extracted from CNN have better representation. Meanwhile, the local coding makes local features more important. Hence the combination of them can get the anticipated better results. The proposed method is extensively evaluated on the PolyU palmprint database and PolyU multispectral palmprint database, illuminating the remarkable performance on palmprint recognition.<br/> &copy; 2017 IEEE.

Number of references:26

Main heading:Palmprint recognition

Controlled terms:Anthropometry - Codes (symbols) - Computer networks - Convolution - Image classification - Image retrieval - Neural networks

Uncontrolled terms:Bag-of-visual words - coding - Coding techniques - Convolutional Neural Networks (CNN) - Local feature - Multispectral palmprint - PolyU Palmprint Database - Vector of locally aggregated descriptors

Classification code:461.3 Biomechanics, Bionics and Biomimetics - 716.1 Information Theory and Signal Processing - 723.2 Data Processing and Image Processing - 723.5 Computer Applications

DOI:10.1109/ICCSNT.2017.8343744

Database:Compendex

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<RECORD 104>

Accession number:20182805544629

Title:A signal processing practice method based on LFMCW radar

Authors:Ma, Ke (1); Zhang, Kaisheng (1); Zhang, Yuanan (1)

Author affiliation:(1) Xi'An Electronic Engineering Research Institute, Xi'an, China

Corresponding author:Ma, Ke(xdmake206@qq.com)

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:In order to overcome the shortcomings of motion target range - velocity coupling in the LFMCW (Linear Frequency Modulation Continuous Wave) radar mechanism, based on the relevant theoretical research results of LFMCW radar signal processing method, combined with the actual needs of the system, a signal processing method based on multi cycle LFMCW radar 'beat - Fourier spectral analysis - MID' structure is put forward, and the distance - velocity decoupling is realized. It is done from the system scheme design, acquisition circuit analysis, and algorithm theory research to the final algorithm DSP realization process. The experimental results show that this method can achieve target detection and parameter estimation, and it can improve the ranging and speed measurement accuracy, and realize the distance - velocity decoupling of LFMCW radar. As a result, it is concluded that the method proposed in this study is simple and feasible, and the measurement accuracy is high, so it can greatly improve the efficiency of radar signal processing.<br/> &copy; 2017 IEEE.

Number of references:8

Main heading:Radar measurement

Controlled terms:Chirp modulation - Computer networks - Data acquisition - Processing - Radar signal processing - Radar target recognition - Signal processing - Spectrum analysis

Uncontrolled terms:DSP realization - Fourier spectral analysis - LFMCW radar - Linear frequency modulation continuous waves - Measurement accuracy - Realization process - Speed measurement - Theoretical research

Classification code:716 Telecommunication; Radar, Radio and Television - 723.2 Data Processing and Image Processing - 913.4 Manufacturing

DOI:10.1109/ICCSNT.2017.8343737

Database:Compendex

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<RECORD 105>

Accession number:20182805544675

Title:Research on load fast control technology in large-scale supply-demand friendly interaction system

Authors:Yu, Wei (1); Liu, Shubo (1); Xiong, Zheng (1); Song, Yu (1); Xu, Daoqiang (2)

Author affiliation:(1) Jiangsu Frontier Electric Technology CO. LTD, Nanjing, Jiangsu Province; 211102, China; (2) Jiangsu Electric Power Company, Nanjing, Jiangsu Province; 210036, China

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:During the 13th Five-Year period, the internal and external environment of Jiangsu Grid development has changed a lot. The first provincial UHVAC ring grid is built in China. Installed capacity of clean energy has doubled and the proportion of electricity consumption achieved 45%. The increased number of electric cars is expected to millions, which will be charged in the city center. Changes in different aspects require that Jiangsu Grid can quickly response to grid emergency exceptions and coordinate user load to guarantee grid stable operation with the minimal cost when grid is broken down. Thus the large-scale supply and demand friendly interactive system is being built by Jiangsu Grid to realize the intelligence interaction and quick control of user load. This paper discusses different technologies of how large-scale supply and demand friendly interactive system can rapidly control the load of interactive user. Several aspects like load control mode, load interactive terminal of smart grid, as well as the master station are all considered in realizing load quick control.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Economics

Controlled terms:Computer networks - Electric load management - Electric power transmission networks - Smart power grids

Uncontrolled terms:Electricity-consumption - External environments - Friendly interaction - Installed capacity - Interactive system - Smart grid - Stable operation - Supply and demand

Classification code:706.1 Electric Power Systems - 706.1.1 Electric Power Transmission - 971 Social Sciences

Numerical data indexing:Percentage 4.50e+01%

DOI:10.1109/ICCSNT.2017.8343752

Database:Compendex

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<RECORD 106>

Accession number:20182805544656

Title:Fully automated segmentation of coronary lumen based on the directional minimal path and image fusion

Authors:Liu, Liu (1); Yao, Yu (1); Sun, Ning (1); Han, Guang (1)

Author affiliation:(1) Nanjing University of Posts and Telecommunication, Nanjing, China

Corresponding author:Liu, Liu(LiuLiu@njupt.edu.cn)

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:The segmentation of coronary lumen is a challenging but important task in clinical application of cardiac computed tomography (CTA). In this paper, a new method is proposed to segment the coronary lumen in a fully automatic manner. This method is based on the directional minimal path and the level-set segmentation in the 2D fused image. The directional minimal path is first used automatically to track the coronary centerlines of the main branches, which provides the center location of the coronary lumen. Then, based on the coronary centerline, the cross-sectional planes are calculated in the 3D CTA images. In order to increase the successful rate of the lumen segmentation, the gray-filtered and vesselness-enhanced images are calculated respectively in the cross-sectional planes and the 3D stacking of the cross-sectional planes. And, the two enhanced images are fused to generate the fused image. Finally, the level-set algorithm is used to segment the coronary lumen in the cross-sectional planes of the fused image. The proposed method is validated by segmenting the lumen of the three main coronary branches. The DICE (Dice coefficients) are 83.2% (RCA), 81.7% (LAD) and 83.5% (LCX), respectively.<br/> &copy; 2017 IEEE.

Number of references:15

Main heading:Image segmentation

Controlled terms:Computer networks - Computerized tomography - Heart - Image enhancement - Image fusion - Numerical methods

Uncontrolled terms:Cardiac-computed tomography - Center locations - Centerlines - Clinical application - Coronary lumen - Level set algorithm - Level set segmentation - Lumen segmentations

Classification code:461.2 Biological Materials and Tissue Engineering - 723.2 Data Processing and Image Processing - 723.5 Computer Applications - 921.6 Numerical Methods

Numerical data indexing:Percentage 8.17e+01%, Percentage 8.32e+01%, Percentage 8.35e+01%

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Accession number:20182805544264

Title:Face detection based on multi task learning and multi layer feature fusion

Authors:Zhang, Yanan (1); Wang, Hongyu (2); Xu, Fang (2)

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Conference location:Dalian, China

Conference code:136082

Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Face detection and facial feature location are two key parts of face recognition system. Usually, these two links are treated as two separate tasks, ignoring the correlation between tasks. In addition, most of the face detection algorithms based on deep convolution neural networks focus only on high-level semantic information of the image, and do not take full advantage of the underlying details of the image. In order to further improve the performance of face detection, we propose a face detection algorithm based on multi task learning and multilayer feature fusion. The proposed method integrates three tasks, namely, face classification, facial feature location, and bounding box regression, into a framework that takes full advantage of the correlation between multiple tasks and performs simultaneous learning over multiple tasks. At the same time, in order to make full use of the low-level details and high-level semantic information of the image, multi layer feature fusion technology is adopted. Finally, we test it on the face detection evaluation database FDDB. Experimental results show that the proposed algorithm has good performance in face detection.<br/> &copy; 2017 IEEE.

Number of references:11

Main heading:Face recognition

Controlled terms:Computer networks - Convolution - Deep neural networks - E-learning - Feature extraction - Location - Semantics - Signal detection

Uncontrolled terms:Convolution neural network - Face detection algorithm - Face recognition systems - Facial feature location - Facial feature points - Feature fusion - High level semantics - Multitask learning

Classification code:716.1 Information Theory and Signal Processing

DOI:10.1109/ICCSNT.2017.8343704

Database:Compendex

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<RECORD 108>

Accession number:20182805544140

Title:Research and design of APP for new energy vehicles electronic control system based on cloud platform

Authors:Lu, Chengqiang (1); Zeng, Jie (1); Zeng, Yizhe (2); Shi, Tiantian (1); Zhang, Yuhua (3); Guo, Yongwei (4)

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:New energy vehicles are energy-efficient and environmental, however, their safety performance is still unstable. With the long-Term operation of the vehicle, its electronic control parameters are no longer suitable for the current vehicle requirements, resulting in the decline of vehicle energy efficiency and performance. So it is necessary to monitor the vehicles in real time and optimize the energy control. Therefore, the development of APP based on Android system and cloud platform is researched. Firstly, an improved scheme of the communication mode and communication protocol between APP and iECU or cloud platform for data interaction is proposed. Secondly, it is necessary to focus attention on the key technology that SQLite involved in the development process of APP, which comes from the database of Android system. In addition, the design and research of main functional interfaces are described in detail. That is the 'Data management' and 'MAP calibration'. Finally, it is necessary to test the functions of APP by iECU or cloud platform. The experiment demonstrates that the developed APP can communicate well with iECU and cloud platform servers, and it can collect and process the data of vehicles. Moreover, the interface of APP is friendly. It is quite easy to operate for users, so as to achieve the desired design goals. Finally, the real-Time monitoring and energy optimization of the key parameters of the vehicle are carried out, so that the vehicle can always run safely and efficiently.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Android (operating system)

Controlled terms:Application programs - Calibration - Computer networks - Electric automobiles - Energy efficiency - Industrial electronics - Information management - Servomechanisms - Vehicle performance

Uncontrolled terms:Android - Cloud platforms - Efficiency and performance - Electronic control systems - Electronic controls - Functional interface - New energy vehicles - Real time monitoring

Classification code:525.2 Energy Conservation - 662.1 Automobiles - 705 Electric Generators and Motors - 723 Computer Software, Data Handling and Applications

DOI:10.1109/ICCSNT.2017.8343682

Database:Compendex

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<RECORD 109>

Accession number:20182805545083

Title:Research on query analysis and optimization based on spark

Authors:Li, Yan (1); Wang, Hongbo (1); Li, Yangyang (2)

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:With the rapid development of the Internet and the explosive growth of information, the traditional technical frame-work can not meet the needs of massive data processing. In this environment, the research and development of big data platform came into being. Compared to Hadoop MapReduce programming model, the Spark computing framework has a better applicability by introducing RDD (Elastic Distributed Data Set) and memory-based computing model. SparkSQL is an api that integrates relational processing and Sparks functional programming. It provides a better choice for handing massive structured data. However, for the most complex and costly inter-table correlation queries in traditional query, Spark SQL's performance is poor. To some extent, it has affected the application of Spark. This paper first introduces the technical background of Spark architecture, Optimizer Catalyst, and then expounds the factors causing low query performance. Then, a design scheme of cost optimization and predicate pushdown is proposed based on Spark SQL. The proposed scheme is based on scalable Catalyst, which improves the performance degradation due to improper selection of table association algorithm and the triggering of shuffle. Finally, the Spark cluster test environment is built to verify the feasibility and performance improvement of the proposed scheme.<br/> &copy; 2017 IEEE.

Number of references:15

Main heading:Big data

Controlled terms:Catalysts - Data handling - Functional programming

Uncontrolled terms:Association algorithms - Cost optimization - Hash join - Memory based computing - Performance degradation - Performance improvements - Relational processing - Research and development

Classification code:723.1 Computer Programming - 723.2 Data Processing and Image Processing - 803 Chemical Agents and Basic Industrial Chemicals - 804 Chemical Products Generally

DOI:10.1109/ICCSNT.2017.8343697

Database:Compendex

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<RECORD 110>

Accession number:20182905546945

Title:Research on hybrid cloud particle swarm optimization for multi-objective flexible job shop scheduling problem

Authors:Liang, Xu (1); Duan, Jiawei (1); Huang, Ming (1)

Author affiliation:(1) Software Institute, Dalian Jiaotong University, Dalian; 116028, China

Source title:Proceedings of 2017 6th International Conference on Computer Science and Network Technology, ICCSNT 2017

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Sponsor:Dalian International Talent Exchange Association; Dalian Jiaotong University; Dalian Municipal Bureau of Foreign Experts; Northeast Normal University; Ritsumeikan University

Publisher:Institute of Electrical and Electronics Engineers Inc.

Abstract:Flexible job shop scheduling is an NP-hard problem. In this paper, we design a novel hybrid cloud particle swarm optimization (HCPSO) algorithm with genetic algorithm (GA) that is adopted to provide optimal solutions according to the pareto optimality principle in solving multi-objective FJSS problem. It is aimed at minimizing completion time of jobs, total workload and maximum workload. The novelty of the new proposed approach is that the whole particles are divided into three different populations respectively with different weights according to the fitness value. The weight has stable tendency and randomness properties based on the cloud model, which not only improves the convergence speed, but also maintains the diversity of the population. The simulation results show that the HCPSO algorithm has the advantages of small optimization, fast convergence, high efficiency and good population diversity, which verifies the effectiveness and the feasibility of HCPSO algorithm. The results of the instance verify that HCPSO algorithm is suitable for multi-objective optimization problems.<br/> &copy; 2017 IEEE.

Number of references:10

Main heading:Job shop scheduling

Controlled terms:Computational complexity - Computer networks - Genetic algorithms - Multiobjective optimization - Pareto principle - Particle swarm optimization (PSO) - Scheduling - Tabu search

Uncontrolled terms:Convergence speed - Flexible job-shop scheduling - Flexible job-shop scheduling problem - Hybrid clouds - Multi-objective optimization problem - Pareto-optimality - Population diversity - Randomness property

Classification code:721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 912.2 Management - 921.5 Optimization Techniques

DOI:10.1109/ICCSNT.2017.8343701

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