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[Advances in Knowledge Discovery and Data Mining](#) - Wee Keong Ng
2006-03-10

This book constitutes the refereed proceedings of the 10th Pacific-Asia Conference on Knowledge Discovery and Data Mining, PAKDD 2006, held in Singapore in April 2006. The 67 revised full papers and 33 revised short papers presented together with 3 invited talks were carefully reviewed and selected from 501 submissions. The papers are organized in topical sections on Classification, Ensemble Learning, Clustering, Support Vector Machines, Text and Document Mining, Web Mining, Bio-Data Mining, and more.

[Data Mining](#) - Graham J. Williams 2006-02-20

This volume provides a snapshot of the current state of the art in data mining, presenting it both in terms of technical developments and industrial applications. The collection of chapters is based on works presented at the Australasian Data Mining conferences and industrial forums. Authors include some of Australia's leading researchers and practitioners in data mining. The volume also contains chapters by regional and international authors.

[ECIC2016-Proceedings of the 8th European Conference on Intellectual Capital](#) - Carlo Bagnoli, Chiara Mio, Andrea Garlatti and Maurizio Massaro 2016-04-21

[Advanced Data Mining and Applications](#) - Gao Cong 2017-10-30

This book constitutes the refereed proceedings of the 13th International Conference on Advanced Data Mining and Applications, ADMA 2017, held in Singapore in November 2017. The 20 full and 38 short papers presented in this volume were carefully reviewed and selected from 118 submissions. The papers were organized in topical sections named: database and distributed machine learning; recommender system; social network and social media; machine learning; classification and clustering methods; behavior modeling and user profiling; bioinformatics and medical data analysis; spatio-temporal data; natural language processing and text mining; data mining applications; applications; and demos.

The History Manifesto - Jo Guldi 2014-10-02

How should historians speak truth to power - and why does it matter? Why is five hundred years better than five months or five years as a planning horizon? And why is history - especially long-term history - so essential to understanding the multiple pasts which gave rise to our conflicted present? The History Manifesto is a call to arms to historians and everyone interested in the role of history in contemporary society. Leading historians Jo Guldi and David Armitage identify a recent shift back to longer-term narratives, following many decades of increasing specialisation, which they argue is vital for the future of historical scholarship and how it is communicated. This provocative and thoughtful

book makes an important intervention in the debate about the role of history and the humanities in a digital age. It will provoke discussion among policymakers, activists and entrepreneurs as well as ordinary listeners, viewers, readers, students and teachers. This title is also available as Open Access.

[Data Mining and Machine Learning Applications](#) - Rohit Raja 2022-03-02

DATA MINING AND MACHINE LEARNING APPLICATIONS The book elaborates in detail on the current needs of data mining and machine learning and promotes mutual understanding among research in different disciplines, thus facilitating research development and collaboration. Data, the latest currency of today's world, is the new gold. In this new form of gold, the most beautiful jewels are data analytics and machine learning. Data mining and machine learning are considered interdisciplinary fields. Data mining is a subset of data analytics and machine learning involves the use of algorithms that automatically improve through experience based on data. Massive datasets can be classified and clustered to obtain accurate results. The most common technologies used include classification and clustering methods. Accuracy and error rates are calculated for regression and classification and clustering to find actual results through algorithms like support vector machines and neural networks with forward and backward propagation. Applications include fraud detection, image processing, medical diagnosis, weather prediction, e-commerce and so forth. The book features: A review of the state-of-the-art in data mining and machine learning, A review and description of the learning methods in human-computer interaction, Implementation strategies and future research directions used to meet the design and application requirements of several modern and real-time applications for a long time, The scope and implementation of a majority of data mining and machine learning strategies. A discussion of real-time problems. Audience Industry and academic researchers, scientists, and engineers in information technology, data science and machine and deep learning, as well as artificial intelligence more broadly.

Mineral Resource Estimation - Mario E. Rossi 2013-12-21

Mineral resource estimation has changed considerably in the past 25 years: geostatistical techniques have become commonplace and continue to evolve; computational horsepower has revolutionized all facets of numerical modeling; mining and processing operations are often larger; and uncertainty quantification is becoming standard practice. Recent books focus on historical methods or details of geostatistical theory. So there is a growing need to collect and synthesize the practice of modern mineral resource estimation into a book for undergraduate students, beginning graduate students, and young geologists and engineers. It is especially fruitful that this book is written by authors with years of relevant experience performing mineral resource estimation and with years of relevant teaching experience. This comprehensive textbook and reference fills this need.

Data Mining for Business Intelligence - Galit Shmueli 2006-12-11

Learn how to develop models for classification, prediction, and customer segmentation with the help of Data Mining for Business Intelligence In today's world, businesses are becoming more capable of accessing their ideal consumers, and an understanding of data mining contributes to this success. Data Mining for Business Intelligence, which was developed from a course taught at the Massachusetts Institute of Technology's Sloan School of Management, and the University of Maryland's Smith School of Business, uses real data and actual cases to illustrate the applicability of data mining intelligence to the development of successful business models. Featuring XLMiner, the Microsoft Office Excel add-in, this book allows readers to follow along and implement algorithms at their own speed, with a minimal learning curve. In addition, students and practitioners of data mining techniques are presented with hands-on, business-oriented applications. An abundant amount of exercises and examples are provided to motivate learning and understanding. Data Mining for Business Intelligence: Provides both a theoretical and practical understanding of the key methods of classification, prediction, reduction, exploration, and affinity analysis Features a business decision-making context for these key methods Illustrates the application and interpretation of these methods using real business cases and data This

book helps readers understand the beneficial relationship that can be established between data mining and smart business practices, and is an excellent learning tool for creating valuable strategies and making wiser business decisions.

Data Mining for Business Analytics - Galit Shmueli 2019-10-14

Data Mining for Business Analytics: Concepts, Techniques, and Applications in Python presents an applied approach to data mining concepts and methods, using Python software for illustration. Readers will learn how to implement a variety of popular data mining algorithms in Python (a free and open-source software) to tackle business problems and opportunities. This is the sixth version of this successful text, and the first using Python. It covers both statistical and machine learning algorithms for prediction, classification, visualization, dimension reduction, recommender systems, clustering, text mining and network analysis. It also includes: A new co-author, Peter Gedeck, who brings both experience teaching business analytics courses using Python, and expertise in the application of machine learning methods to the drug-discovery process. A new section on ethical issues in data mining. Updates and new material based on feedback from instructors teaching MBA, undergraduate, diploma and executive courses, and from their students. More than a dozen case studies demonstrating applications for the data mining techniques described. End-of-chapter exercises that help readers gauge and expand their comprehension and competency of the material presented. A companion website with more than two dozen data sets, and instructor materials including exercise solutions, PowerPoint slides, and case solutions. Data Mining for Business Analytics: Concepts, Techniques, and Applications in Python is an ideal textbook for graduate and upper-undergraduate level courses in data mining, predictive analytics, and business analytics. This new edition is also an excellent reference for analysts, researchers, and practitioners working with quantitative methods in the fields of business, finance, marketing, computer science, and information technology. "This book has by far the most comprehensive review of business analytics methods that I have ever seen, covering everything from classical approaches such as linear and

logistic regression, through to modern methods like neural networks, bagging and boosting, and even much more business specific procedures such as social network analysis and text mining. If not the bible, it is at the least a definitive manual on the subject." —Gareth M. James, University of Southern California and co-author (with Witten, Hastie and Tibshirani) of the best-selling book An Introduction to Statistical Learning, with Applications in R

Evaluation of Mineral Reserves - Andre G. Journel 2004-05-27

This book addresses the practice of geostatistical simulation to evaluation of mineral reserves, prediction of recovered tonnages and mineral grades and the impact of mining dilution. Such prediction is absolutely critical for mine planning and investment decisions, yet it cannot be made on maps directly interpolated from present data. Various dilution factors need to be introduced to account for · the support effect: mining unit volumes are vastly different from composite data unit volumes · the information effect: future selection of ore/waste will be based on vastly different data than that presently available. Geostatistical simulations allow a rigorous evaluation of these effects on reserves recovery. These stochastic simulations have the potential to be for the mining industry what a wind tunnel is for aircraft design. This book is written by two expert geostatisticians--Journel is the pioneer of mining geostatistics--and established academics.

Online Portfolio Selection - Bin Li 2018-10-30

With the aim to sequentially determine optimal allocations across a set of assets, Online Portfolio Selection (OLPS) has significantly reshaped the financial investment landscape. Online Portfolio Selection: Principles and Algorithms supplies a comprehensive survey of existing OLPS principles and presents a collection of innovative strategies that leverage machine learning techniques for financial investment. The book presents four new algorithms based on machine learning techniques that were designed by the authors, as well as a new back-test system they developed for evaluating trading strategy effectiveness. The book uses simulations with real market data to illustrate the trading strategies in action and to provide readers with the confidence to deploy the strategies themselves.

The book is presented in five sections that: Introduce OLPS and formulate OLPS as a sequential decision task Present key OLPS principles, including benchmarks, follow the winner, follow the loser, pattern matching, and meta-learning Detail four innovative OLPS algorithms based on cutting-edge machine learning techniques Provide a toolbox for evaluating the OLPS algorithms and present empirical studies comparing the proposed algorithms with the state of the art Investigate possible future directions Complete with a back-test system that uses historical data to evaluate the performance of trading strategies, as well as MATLAB® code for the back-test systems, this book is an ideal resource for graduate students in finance, computer science, and statistics. It is also suitable for researchers and engineers interested in computational investment. Readers are encouraged to visit the authors' website for updates: <http://olps.stevenhoi.org>.

The Oxford Handbook of Law, Regulation and Technology - Roger Brownsword 2017-07-24

The variety, pace, and power of technological innovations that have emerged in the 21st Century have been breathtaking. These technological developments, which include advances in networked information and communications, biotechnology, neurotechnology, nanotechnology, robotics, and environmental engineering technology, have raised a number of vital and complex questions. Although these technologies have the potential to generate positive transformation and help address 'grand societal challenges', the novelty associated with technological innovation has also been accompanied by anxieties about their risks and destabilizing effects. Is there a potential harm to human health or the environment? What are the ethical implications? Do these innovations erode or antagonize values such as human dignity, privacy, democracy, or other norms underpinning existing bodies of law and regulation? These technological developments have therefore spawned a nascent but growing body of 'law and technology' scholarship, broadly concerned with exploring the legal, social and ethical dimensions of technological innovation. This handbook collates the many and varied strands of this scholarship, focusing broadly across a range of new and

emerging technology and a vast array of social and policy sectors, through which leading scholars in the field interrogate the interfaces between law, emerging technology, and regulation. Structured in five parts, the handbook (I) establishes the collection of essays within existing scholarship concerned with law and technology as well as regulatory governance; (II) explores the relationship between technology development by focusing on core concepts and values which technological developments implicate; (III) studies the challenges for law in responding to the emergence of new technologies, examining how legal norms, doctrine and institutions have been shaped, challenged and destabilized by technology, and even how technologies have been shaped by legal regimes; (IV) provides a critical exploration of the implications of technological innovation, examining the ways in which technological innovation has generated challenges for regulators in the governance of technological development, and the implications of employing new technologies as an instrument of regulatory governance; (V) explores various interfaces between law, regulatory governance, and new technologies across a range of key social domains.

Fuzzy Systems and Data Mining V - A.J. Tallón-Ballesteros 2019-11-06

The Fuzzy Systems and Data Mining (FSDM) conference is an annual event encompassing four main themes: fuzzy theory, algorithms and systems, which includes topics like stability, foundations and control; fuzzy application, which covers different kinds of processing as well as hardware and architectures for big data and time series and has wide applicability; the interdisciplinary field of fuzzy logic and data mining, encompassing applications in electrical, industrial, chemical and engineering fields as well as management and environmental issues; and data mining, outlining new approaches to big data, massive data, scalable, parallel and distributed algorithms. The annual conference provides a platform for knowledge exchange between international experts, researchers, academics and delegates from industry. This book includes the papers accepted and presented at the 5th International Conference on Fuzzy Systems and Data Mining (FSDM 2019), held in Kitakyushu, Japan on 18-21 October 2019. This year, FSDM received 442

submissions. All papers were carefully reviewed by program committee members, taking account of the quality, novelty, soundness, breadth and depth of the research topics falling within the scope of FSDM. The committee finally decided to accept 137 papers, which represents an acceptance rate of about 30%. The papers presented here are arranged in two sections: Fuzzy Sets and Data Mining, and Communications and Networks. Providing an overview of the most recent scientific and technological advances in the fields of fuzzy systems and data mining, the book will be of interest to all those working in these fields.

Advances in Knowledge Discovery and Data Mining - Kamal Karlapalem 2021-05-08

The 3-volume set LNAI 12712-12714 constitutes the proceedings of the 25th Pacific-Asia Conference on Advances in Knowledge Discovery and Data Mining, PAKDD 2021, which was held during May 11-14, 2021. The 157 papers included in the proceedings were carefully reviewed and selected from a total of 628 submissions. They were organized in topical sections as follows: Part I: Applications of knowledge discovery and data mining of specialized data; Part II: Classical data mining; data mining theory and principles; recommender systems; and text analytics; Part III: Representation learning and embedding, and learning from data.

The Rise of Big Data Policing - Andrew G. Ferguson 2017-10-03

Winner, 2018 Law & Legal Studies PROSE Award The consequences of big data and algorithm-driven policing and its impact on law enforcement In a high-tech command center in downtown Los Angeles, a digital map lights up with 911 calls, television monitors track breaking news stories, surveillance cameras sweep the streets, and rows of networked computers link analysts and police officers to a wealth of law enforcement intelligence. This is just a glimpse into a future where software predicts future crimes, algorithms generate virtual “most-wanted” lists, and databanks collect personal and biometric information. The Rise of Big Data Policing introduces the cutting-edge technology that is changing how the police do their jobs and shows why it is more important than ever that citizens understand the far-reaching consequences of big data surveillance as a law enforcement tool. Andrew

Guthrie Ferguson reveals how these new technologies —viewed as race-neutral and objective—have been eagerly adopted by police departments hoping to distance themselves from claims of racial bias and unconstitutional practices. After a series of high-profile police shootings and federal investigations into systemic police misconduct, and in an era of law enforcement budget cutbacks, data-driven policing has been billed as a way to “turn the page” on racial bias. But behind the data are real people, and difficult questions remain about racial discrimination and the potential to distort constitutional protections. In this first book on big data policing, Ferguson offers an examination of how new technologies will alter the who, where, when and how we police. These new technologies also offer data-driven methods to improve police accountability and to remedy the underlying socio-economic risk factors that encourage crime. The Rise of Big Data Policing is a must read for anyone concerned with how technology will revolutionize law enforcement and its potential threat to the security, privacy, and constitutional rights of citizens. Read an excerpt and interview with Andrew Guthrie Ferguson in The Economist.

Data Mining: Introductory And Advanced Topics - Margaret H Dunham 2006-09

Stem Cell Transcriptional Networks - Benjamin L Kidder 2014-04-18

Stem Cell Transcriptional Networks: Methods and Protocols collects techniques used to increase our understanding of the underlying transcriptional programs of stem cells that promote self-renewal and differentiation. The volume opens with a section on next-generation sequencing library preparation and data analysis. Continuing with a collection of protocols on visual analysis and interpretation of large-scale interaction networks, this detailed compilation features transcriptional networks in embryonic and adult stem cells, embryo culture and derivation of stem cells, as well as transcriptional programs that promote self-renewal, reprogramming, and transdifferentiation. Written for the highly successful Methods in Molecular Biology series, chapters include introductions to their respective topics, lists of the necessary materials,

step-by-step, readily reproducible protocols and tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, *Stem Cell Transcriptional Networks: Methods and Protocols* aims to provide a key resource for biologists seeking to interrogate these vital networks.

Advances in Applied Strategic Mine Planning - Roussos Dimitrakopoulos 2018-01-17

This book presents a collection of papers on topics in the field of strategic mine planning, including orebody modeling, mine-planning optimization and the optimization of mining complexes. Elaborating on the state of the art in the field, it describes the latest technologies and related research as well as the applications of a range of related technologies in diverse industrial contexts.

The Cambridge Handbook of Surveillance Law - David Gray 2017-10-12

Surveillance presents a conundrum: how to ensure safety, stability, and efficiency while respecting privacy and individual liberty. From police officers to corporations to intelligence agencies, surveillance law is tasked with striking this difficult and delicate balance. That challenge is compounded by ever-changing technologies and evolving social norms. Following the revelations of Edward Snowden and a host of private-sector controversies, there is intense interest among policymakers, business leaders, attorneys, academics, students, and the public regarding legal, technological, and policy issues relating to surveillance. This handbook documents and organizes these conversations, bringing together some of the most thoughtful and impactful contributors to contemporary surveillance debates, policies, and practices. Its pages explore surveillance techniques and technologies; their value for law enforcement, national security, and private enterprise; their impacts on citizens and communities; and the many ways societies do - and should - regulate surveillance.

Data Mining and Predictive Analysis - Colleen McCue 2014-12-30

Data Mining and Predictive Analysis: Intelligence Gathering and Crime Analysis, 2nd Edition, describes clearly and simply how crime clusters and other intelligence can be used to deploy security resources most

effectively. Rather than being reactive, security agencies can anticipate and prevent crime through the appropriate application of data mining and the use of standard computer programs. *Data Mining and Predictive Analysis* offers a clear, practical starting point for professionals who need to use data mining in homeland security, security analysis, and operational law enforcement settings. This revised text highlights new and emerging technology, discusses the importance of analytic context for ensuring successful implementation of advanced analytics in the operational setting, and covers new analytic service delivery models that increase ease of use and access to high-end technology and analytic capabilities. The use of predictive analytics in intelligence and security analysis enables the development of meaningful, information based tactics, strategy, and policy decisions in the operational public safety and security environment. Discusses new and emerging technologies and techniques, including up-to-date information on predictive policing, a key capability in law enforcement and security Demonstrates the importance of analytic context beyond software Covers new models for effective delivery of advanced analytics to the operational environment, which have increased access to even the most powerful capabilities Includes terminology, concepts, practical application of these concepts, and examples to highlight specific techniques and approaches in crime and intelligence analysis

Computer Applications in the Mineral Industries - Heping Xie 2020-12-17

This text covers the use of computer applications in the mineral industries, encompassing topics such as the use of computer visualization in mining systems and aspects such as ventilation and safety.

Data Visualization - Kieran Healy 2018-12-18

An accessible primer on how to create effective graphics from data This book provides students and researchers a hands-on introduction to the principles and practice of data visualization. It explains what makes some graphs succeed while others fail, how to make high-quality figures from data using powerful and reproducible methods, and how to think about data visualization in an honest and effective way. *Data Visualization*

builds the reader's expertise in ggplot2, a versatile visualization library for the R programming language. Through a series of worked examples, this accessible primer then demonstrates how to create plots piece by piece, beginning with summaries of single variables and moving on to more complex graphics. Topics include plotting continuous and categorical variables; layering information on graphics; producing effective "small multiple" plots; grouping, summarizing, and transforming data for plotting; creating maps; working with the output of statistical models; and refining plots to make them more comprehensible. Effective graphics are essential to communicating ideas and a great way to better understand data. This book provides the practical skills students and practitioners need to visualize quantitative data and get the most out of their research findings. Provides hands-on instruction using R and ggplot2 Shows how the "tidyverse" of data analysis tools makes working with R easier and more consistent Includes a library of data sets, code, and functions

Closed Loop Management in Mineral Resource Extraction - Jörg Benndorf 2020-02-13

This book describes an innovative closed-loop concept that allows the feedback of online data from operational monitoring to create mining intelligence. The application of this concept promises significant improvements in economic and environmental key performance indicators for any mining operation. Combining theory with industrial case studies, the book guides readers through this process by providing theoretical background, addressing practical issues related to operational implementation, and illustrating the impact on selected examples. This new concept is presented using the example of a bulk and gold mining application, but is applicable at any mine where grade control is important. The book is of interest to industrial professionals involved in operational monitoring, mining intelligence, and mine planning optimization, as well as to researchers and academics in the field of applied geostatistics.

Advances in Knowledge Discovery and Data Mining - Pacific-Asia Conference on Knowledge Discovery and Data Mining 2003 s 2003-04-16

This book constitutes the refereed proceedings of the 7th Pacific-Asia Conference on Knowledge Discovery and Data Mining, PAKDD 2003, held in Seoul, Korea in April/Mai 2003. The 38 revised full papers and 20 revised short papers presented together with two invited industrial contributions were carefully reviewed and selected from 215 submissions. The papers are presented in topical sections on stream mining, graph mining, clustering, text mining, Bayesian networks, association rules, semi-structured data mining, classification, data analysis, and feature selection.

Proceedings of the Fifth SIAM International Conference on Data Mining - Hillol Kargupta 2005-04-01

The Fifth SIAM International Conference on Data Mining continues the tradition of providing an open forum for the presentation and discussion of innovative algorithms as well as novel applications of data mining. Advances in information technology and data collection methods have led to the availability of large data sets in commercial enterprises and in a wide variety of scientific and engineering disciplines. The field of data mining draws upon extensive work in areas such as statistics, machine learning, pattern recognition, databases, and high performance computing to discover interesting and previously unknown information in data. This conference results in data mining, including applications, algorithms, software, and systems.

Neural Information Processing - Masumi Ishikawa 2008-06-29

These two-volume books comprise the post-conference proceedings of the 14th International Conference on Neural Information Processing (ICONIP 2007) held in Kitakyushu, Japan, during November 13-16, 2007. The Asia Pacific Neural Network Assembly (APNNA) was founded in 1993. The first ICONIP was held in 1994 in Seoul, Korea, sponsored by APNNA in collaboration with regional organizations. Since then, ICONIP has consistently provided prestigious opportunities for presenting and exchanging ideas on neural networks and related fields. Research fields covered by ICONIP have now expanded to include such fields as bioinformatics, brain machine interfaces, robotics, and computational intelligence. We had 288 ordinary paper submissions and 3 special

organized session proposals. Although the quality of submitted papers on the average was exceptionally high, only 60% of them were accepted after rigorous reviews, each paper being reviewed by three reviewers. Concerning special organized session proposals, two out of three were accepted. In addition to ordinary submitted papers, we invited 15 special organized sessions organized by leading researchers in emerging fields to promote future expansion of neural information processing. ICONIP 2007 was held at the newly established Kitakyushu Science and Research Park in Kitakyushu, Japan. Its theme was "Towards an Integrated Approach to the Brain—Brain-Inspired Engineering and Brain Science," which emphasizes the need for cross-disciplinary approaches for understanding brain functions and utilizing the knowledge for contributions to the society. It was jointly sponsored by APNNA, Japanese Neural Network Society (JNNS), and the 21st century COE program at Kyushu Institute of Technology.

Creating a New Management University - Howard Thomas 2022-07-04
This book provides an in-depth exploration of one of the most significant success stories of the development of an entrepreneurial university in recent times as well as its role within society and the economy. Written by leading business school Dean and scholar, Howard Thomas, and Alex Wilson and Michelle Lee, the book tracks the genesis of the idea of a third local university in Singapore to its fruition as Singapore Management University (SMU). It provides important insight and lessons for senior university and business school leaders, as well as regional and national governments. The increasing emphasis on the importance of innovative, entrepreneurial universities for social and economic growth has prompted this review of the strategy and impact of SMU. The book addresses the strategic evolution of SMU itself, from its origins as a single business school, into a multi-school, social science-focused school of management. It examines whether it has fulfilled its promise as an entrepreneurial university and a change agent in the context of Singapore's strong economic growth and educational strategy. More broadly, it explores how investment in education, and entrepreneurial universities such as SMU, can facilitate and enhance economic growth.

University leadership teams, policy analysts, faculty and students of entrepreneurship education, education management and policy in general, and business education in particular, will find this book an invaluable insight into building a genuinely entrepreneurial university.

Data Mining for Service - Katsutoshi Yada 2014-01-03

Virtually all nontrivial and modern service related problems and systems involve data volumes and types that clearly fall into what is presently meant as "big data", that is, are huge, heterogeneous, complex, distributed, etc. Data mining is a series of processes which include collecting and accumulating data, modeling phenomena, and discovering new information, and it is one of the most important steps to scientific analysis of the processes of services. Data mining application in services requires a thorough understanding of the characteristics of each service and knowledge of the compatibility of data mining technology within each particular service, rather than knowledge only in calculation speed and prediction accuracy. Varied examples of services provided in this book will help readers understand the relation between services and data mining technology. This book is intended to stimulate interest among researchers and practitioners in the relation between data mining technology and its application to other fields.

Rough Sets, Fuzzy Sets, Data Mining and Granular Computing - Hiroshi Sakai 2009-12-15

This book constitutes the refereed proceedings of the 12th International Conference on Rough Sets, Fuzzy Sets, Data Mining, and Granular Computing, RSFDGrC 2009, held in Delhi, India in December 2009 in conjunction with the Third International Conference on Pattern Recognition and Machine Intelligence, PReMI 2009. RSFDGrC 2009 is the core component of a broader Rough Set Year in India initiative, RSIndia09. The 56 revised full papers presented together with 6 invited papers and a report on the Rough Set Year in India 2009 project were carefully reviewed and selected from a total of 130 submissions. The papers are organized in topical sections on foundations of rough sets and beyond; rough set algorithms and applications; fuzzy set foundations and applications; data mining and knowledge discovery; clustering and

current trends in computing; and information retrieval and text mining.
Adaptive Resonance Theory in Social Media Data Clustering - Lei Meng 2019-04-30

Social media data contains our communication and online sharing, mirroring our daily life. This book looks at how we can use and what we can discover from such big data: Basic knowledge (data & challenges) on social media analytics Clustering as a fundamental technique for unsupervised knowledge discovery and data mining A class of neural inspired algorithms, based on adaptive resonance theory (ART), tackling challenges in big social media data clustering Step-by-step practices of developing unsupervised machine learning algorithms for real-world applications in social media domain Adaptive Resonance Theory in Social Media Data Clustering stands on the fundamental breakthrough in cognitive and neural theory, i.e. adaptive resonance theory, which simulates how a brain processes information to perform memory, learning, recognition, and prediction. It presents initiatives on the mathematical demonstration of ART's learning mechanisms in clustering, and illustrates how to extend the base ART model to handle the complexity and characteristics of social media data and perform associative analytical tasks. Both cutting-edge research and real-world practices on machine learning and social media analytics are included in the book and if you wish to learn the answers to the following questions, this book is for you: How to process big streams of multimedia data? How to analyze social networks with heterogeneous data? How to understand a user's interests by learning from online posts and behaviors? How to create a personalized search engine by automatically indexing and searching multimodal information resources? .

Crime And Behaviour: An Introduction To Criminal And Forensic Psychology - Majeed Khader 2019-06-24

Crime and Behaviour: An Introduction to Criminal and Forensic Psychology is the first textbook to provide a detailed overview of criminal psychology in Singapore. The textbook puts together ideas relating to crime, crime prevention, and criminal psychology, as it occurs in the Singaporean context. While leveraging on psychology as an anchor, the

book adopts a multidisciplinary perspective and examines the forensic sciences angle, legal issues, and the investigative perspectives of crimes. The chapters cover criminal justice agencies in Singapore, theories of crime, deception and lying behaviors, sex crimes, violent crimes, crime prevention, terrorism, and psychology applied in legal settings. Each chapter contains case studies of actual cases and ends with questions for discussion and research, making this a valuable text for courses in university and in law enforcement settings. This textbook has several unique features, such as:

Applied Mining Geology - Marat Abzalov 2016-08-10

This book provides a detailed overview of the operational principles of modern mining geology, which are presented as a good mix of theory and practice, allowing use by a broad range of specialists, from students to lecturers and experienced geologists. The book includes comprehensive descriptions of mining geology techniques, including conventional methods and new approaches. The attributes presented in the book can be used as a reference and as a guide by mining industry specialists developing mining projects and for optimizing mining geology procedures. Applications of the methods are explained using case studies and are facilitated by the computer scripts added to the book as Electronic Supplementary Material.

Music Data Mining - Tao Li 2011-07-12

The research area of music information retrieval has gradually evolved to address the challenges of effectively accessing and interacting large collections of music and associated data, such as styles, artists, lyrics, and reviews. Bringing together an interdisciplinary array of top researchers, Music Data Mining presents a variety of approaches to successfully employ data mining techniques for the purpose of music processing. The book first covers music data mining tasks and algorithms and audio feature extraction, providing a framework for subsequent chapters. With a focus on data classification, it then describes a computational approach inspired by human auditory perception and examines instrument recognition, the effects of music on moods and emotions, and the connections between power laws and music aesthetics.

Given the importance of social aspects in understanding music, the text addresses the use of the Web and peer-to-peer networks for both music data mining and evaluating music mining tasks and algorithms. It also discusses indexing with tags and explains how data can be collected using online human computation games. The final chapters offer a balanced exploration of hit song science as well as a look at symbolic musicology and data mining. The multifaceted nature of music information often requires algorithms and systems using sophisticated signal processing and machine learning techniques to better extract useful information. An excellent introduction to the field, this volume presents state-of-the-art techniques in music data mining and information retrieval to create novel ways of interacting with large music collections.

Machine Learning and Data Mining in Pattern Recognition - Petra Pernert
2009-07-21

There is no royal road to science, and only those who do not dread the fatiguing climb of its steep paths have a chance of gaining its luminous summits. Karl Marx A Universal Genius of the 19th Century Many scientists from all over the world during the past two years since the MLDM 2007 have come along on the stony way to the sunny summit of science and have worked hard on new ideas and applications in the area of data mining in pattern recognition. Our thanks go to all those who took part in this year's MLDM. We appreciate their submissions and the ideas shared with the Program Committee. We received over 205 submissions from all over the world to the International Conference on Machine Learning and Data Mining, MLDM 2009. The Program Committee carefully selected the best papers for this year's program and gave detailed comments on each submitted paper. There were 63 papers selected for oral presentation and 17 papers for poster presentation. The topics range from theoretical topics for classification, clustering, association rule and pattern mining to specific data-mining methods for the different multimedia data types such as image mining, text mining, video mining and Web mining. Among these topics this year were special contributions to subtopics such as attribute discretization and data

preparation, novelty and outlier detection, and distances and similarities. **Advances in Knowledge Discovery and Data Mining** - Qiang Yang
2019-04-03

The three-volume set LNAI 11439, 11440, and 11441 constitutes the thoroughly refereed proceedings of the 23rd Pacific-Asia Conference on Knowledge Discovery and Data Mining, PAKDD 2019, held in Macau, China, in April 2019. The 137 full papers presented were carefully reviewed and selected from 542 submissions. The papers present new ideas, original research results, and practical development experiences from all KDD related areas, including data mining, data warehousing, machine learning, artificial intelligence, databases, statistics, knowledge engineering, visualization, decision-making systems, and the emerging applications. They are organized in the following topical sections: classification and supervised learning; text and opinion mining; spatio-temporal and stream data mining; factor and tensor analysis; healthcare, bioinformatics and related topics; clustering and anomaly detection; deep learning models and applications; sequential pattern mining; weakly supervised learning; recommender system; social network and graph mining; data pre-processing and feature selection; representation learning and embedding; mining unstructured and semi-structured data; behavioral data mining; visual data mining; and knowledge graph and interpretable data mining.

Network Data Mining And Analysis - Gao Ming 2018-09-27

Online social networking sites like Facebook, LinkedIn, and Twitter, offer millions of members the opportunity to befriend one another, send messages to each other, and post content on the site — actions which generate mind-boggling amounts of data every day. To make sense of the massive data from these sites, we resort to social media mining to answer questions like the following: Social media shatters the boundaries between the real world and the virtual world. We can now integrate social theories with computational methods to study how individuals interact with each other and how social communities form in bipartite and signed networks. The uniqueness of social media data calls for novel data mining techniques that can effectively handle user generated

content with rich social relations. The study and development of these new techniques are under the purview of social media mining, an emerging discipline under the umbrella of data mining. Social Media Mining is the process of representing, analyzing, and extracting actionable patterns from social media data.

Emerging Technologies in Data Mining and Information Security - Ajith Abraham 2018-09-01

The book features research papers presented at the International Conference on Emerging Technologies in Data Mining and Information Security (IEMIS 2018) held at the University of Engineering & Management, Kolkata, India, on February 23–25, 2018. It comprises high-quality research by academics and industrial experts in the field of computing and communication, including full-length papers, research-in-progress papers, case studies related to all the areas of data mining, machine learning, IoT and information security.

Integration Challenges for Analytics, Business Intelligence, and Data Mining - Azevedo, Ana 2020-12-11

As technology continues to advance, it is critical for businesses to implement systems that can support the transformation of data into information that is crucial for the success of the company. Without the integration of data (both structured and unstructured) mining in business intelligence systems, invaluable knowledge is lost. However, there are currently many different models and approaches that must be explored to determine the best method of integration. *Integration Challenges for Analytics, Business Intelligence, and Data Mining* is a relevant academic book that provides empirical research findings on increasing the understanding of using data mining in the context of business intelligence and analytics systems. Covering topics that include big data, artificial intelligence, and decision making, this book is an ideal reference source for professionals working in the areas of data mining, business intelligence, and analytics; data scientists; IT specialists;

managers; researchers; academicians; practitioners; and graduate students.

Rough Sets, Fuzzy Sets, Data Mining, and Granular Computing - Davide Ciucci 2013-10-07

This book constitutes the thoroughly refereed conference proceedings of the 14th International Conference on Rough Sets, Fuzzy Sets, Data Mining and Granular Computing, RSFDGrC 2013, held in Halifax, Canada in October 2013 as one of the co-located conference of the 2013 Joint Rough Set Symposium, JRS 2013. The 69 papers (including 44 regular and 25 short papers) included in the JRS proceedings (LNCS 8170 and LNCS 8171) were carefully reviewed and selected from 106 submissions. The papers in this volume cover topics such as inconsistency, incompleteness, non-determinism; fuzzy and rough hybridization; granular computing and covering-based rough sets; soft clustering; image and medical data analysis.

Fuzzy Systems and Data Mining III - A.J. Tallón-Ballesteros 2017-11-07

Data science is proving to be one of the major trends of the second decade of the 21st century. Even though the term was coined by Peter Naur in the mid 1960s as ‘datalogy’, or the science of data, it is in the context of data analytics, and especially of big data, that data science has emerged as the new paradigm. Fuzzy and Crisp strategies are two of the most widespread approaches within the computational intelligence umbrella. This book presents 65 papers from the 3rd International Conference on Fuzzy Systems and Data Mining (FSDM 2017), held in Hualien, Taiwan, in November 2017. All papers were carefully reviewed by program committee members, who took into consideration the breadth and depth of the research topics that fall within the scope of FSDM. Offering a state-of-the-art overview of fuzzy systems and data mining, the publication will be of interest to all those whose work involves data science.