
A New Feature Reduction Method For Mammogram Mass

MICAI 2006: Advances in Artificial Intelligence
Advanced Computing, Networking and Informatics- Volume 1
Data Analytics in Bioinformatics
Advances in Computational Toxicology
Theory, Exercises and Solutions
A Machine Learning Perspective
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PAKDD 2013 Workshops: DMAApps, DANTh, QIMIE, BDM, CDA, CloudSD, Golden Coast, QLD, Australia, Revised Selected Papers
Computational Genomics with R
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A Guided Tour
Feature Engineering and Selection
9th International Conference on Practical Applications of Computational Biology and Bioinformatics
Advanced Computing and Informatics Proceedings of the Second International Conference on Advanced Computing, Networking and Informatics (ICACNI-2014)
Foundations, Algorithms, and Applications
Computational Methods of Feature Selection
Handbook of Research on Modeling, Analysis, and Application of Nature-Inspired Metaheuristic Algorithms
Privacy, Intrusion Detection and Response: Technologies for Protecting Networks
Brain-Computer Interfaces
Modern Heuristic Optimization Techniques
Smart Sensor Technologies and Signal Processing
Method of Dimensionality Reduction in Contact Mechanics and Friction
13th Iberoamerican Congress on Pattern Recognition, CIARP 2008, Havana, Cuba, September 9-12, 2008, Proceedings
Computational Intelligence
Health Monitoring of Aerospace Structures
Technologies for Protecting Networks
Machine Learning Techniques for Multimedia
Methodologies and Applications in Regulatory Science
Data Cleaning, Feature Selection, and Data Transforms in Python
28th International Conference, DEXA 2017, Lyon, France, August 28-31, 2017, Proceedings, Part I
Understanding and Using Rough Set Based Feature Selection: Concepts, Techniques and Applications
Advanced Machine Learning Technologies and Applications
Machine Learning Refined
Data Mining with SPSS Modeler
ERCICA 2020, Volume 1
Progresses in Artificial Intelligence and Neural Systems

DECKER TOWNSEND**MICAI 2006: Advances in Artificial Intelligence** Springer

This book provides a comprehensive review of both traditional and cutting-edge methodologies that are currently used in computational toxicology and specifically features its application in regulatory decision making. The authors from various government agencies such as FDA, NCATS and NIEHS industry, and academic institutes share their real-world experience and discuss most current practices in computational toxicology and potential applications in regulatory science. Among the topics covered are molecular modeling and molecular dynamics simulations, machine learning methods for toxicity analysis, network-based approaches for the assessment of drug toxicity and toxicogenomic analyses. Offering a valuable reference guide to computational toxicology and potential applications in regulatory science, this book will appeal to chemists, toxicologists, drug discovery and development researchers as well as to regulatory scientists, government reviewers and graduate students interested in this field.

Springer Science & Business Media

This book presents the proceedings of International Conference on Emerging Research in Computing, Information, Communication and Applications, ERCICA 2020. The conference provides an interdisciplinary forum for researchers, professional engineers and scientists, educators and technologists to discuss, debate and promote research and technology in the upcoming areas of computing, information, communication and their applications. The book discusses these emerging research areas, providing a valuable resource for researchers and practicing engineers alike.

**Advanced Computing, Networking and Informatics-
Volume 1** Springer

Computational Genomics with R provides a starting point for beginners in genomic data analysis and also guides more advanced practitioners to sophisticated data analysis techniques in genomics. The book covers topics from R programming, to machine learning and statistics, to the latest genomic data analysis techniques. The text provides accessible information and explanations, always with the genomics context in the

background. This also contains practical and well-documented examples in R so readers can analyze their data by simply reusing the code presented. As the field of computational genomics is interdisciplinary, it requires different starting points for people with different backgrounds. For example, a biologist might skip sections on basic genome biology and start with R programming, whereas a computer scientist might want to start with genome biology. After reading: You will have the basics of R and be able to dive right into specialized uses of R for computational genomics such as using Bioconductor packages. You will be familiar with statistics, supervised and unsupervised learning techniques that are important in data modeling, and exploratory analysis of high-dimensional data. You will understand genomic intervals and operations on them that are used for tasks such as aligned read counting and genomic feature annotation. You will know the basics of processing and quality checking high-throughput sequencing data. You will be able to do sequence analysis, such as calculating GC content for parts of a genome or finding transcription factor binding sites. You will know about visualization techniques used in genomics, such as heatmaps, meta-gene plots, and genomic track visualization. You will be familiar with analysis of different high-throughput sequencing data sets, such as RNA-seq, ChIP-seq, and BS-seq. You will know basic techniques for integrating and interpreting multi-omics datasets. Altuna Akalin is a group leader and head of the Bioinformatics and Omics Data Science Platform at the Berlin Institute of Medical Systems Biology, Max Delbrück Center, Berlin. He has been developing computational methods for analyzing and integrating large-scale genomics data sets since 2002. He has published an extensive body of work in this area. The framework for this book grew out of the yearly computational genomics courses he has been organizing and teaching since 2015.

Data Analytics in Bioinformatics Springer

Proceedings of the Sixth International Conference on Intelligent System and Knowledge Engineering presents selected papers from the conference ISKE 2011, held December 15-17 in Shanghai, China. This proceedings doesn't only examine original research and approaches in the broad areas of intelligent systems and knowledge engineering, but also present new methodologies and practices in intelligent computing paradigms. The book introduces the current scientific and technical advances in the

fields of artificial intelligence, machine learning, pattern recognition, data mining, information retrieval, knowledge-based systems, knowledge representation and reasoning, multi-agent systems, natural-language processing, etc. Furthermore, new computing methodologies are presented, including cloud computing, service computing and pervasive computing with traditional intelligent methods. The proceedings will be beneficial for both researchers and practitioners who want to utilize intelligent methods in their specific research fields. Dr. Yinglin Wang is a professor at the Department of Computer Science and Engineering, Shanghai Jiao Tong University, China; Dr. Tianrui Li is a professor at the School of Information Science and Technology, Southwest Jiaotong University, China.

Advances in Computational Toxicology CRC Press

Intrusions constitute one of the main issues in computer network security. Through malicious actions, hackers can have unauthorised access that compromises the integrity, the confidentiality, and the availability of resources or services. Intrusion detection systems (IDSs) have been developed to monitor and filter network activities by identifying attacks and alerting network administrators.

Theory, Exercises and Solutions CRC Press

This book aims to examine innovation in the fields of information technology, software engineering, industrial engineering, management engineering. Topics covered in this publication include; Information System Security, Privacy, Quality Assurance, High-Performance Computing and Information System Management and Integration. The book presents papers from The Second International Conference for Emerging Technologies Information Systems, Computing, and Management (ICM2012) which was held on December 1 to 2, 2012 in Hangzhou, China.

A Machine Learning Perspective Springer

The success of a BCI system depends as much on the system itself as on the user's ability to produce distinctive EEG activity. BCI systems can be divided into two groups according to the placement of the electrodes used to detect and measure neurons firing in the brain. These groups are: invasive systems, electrodes are inserted directly into the cortex are used for single cell or multi unit recording, and electrocorticography (EcoG), electrodes are placed on the surface of the cortex (or dura); noninvasive systems, they are placed on the scalp and use

electroencephalography (EEG) or magnetoencephalography (MEG) to detect neuron activity. The book is basically divided into three parts. The first part of the book covers the basic concepts and overviews of Brain Computer Interface. The second part describes new theoretical developments of BCI systems. The third part covers views on real applications of BCI systems.

Trends and Applications in Knowledge Discovery and Data Mining CRC Press

The rough and fuzzy set approaches presented here open up many new frontiers for continued research and development Computational Intelligence and Feature Selection provides readers with the background and fundamental ideas behind Feature Selection (FS), with an emphasis on techniques based on rough and fuzzy sets. For readers who are less familiar with the subject, the book begins with an introduction to fuzzy set theory and fuzzy-rough set theory. Building on this foundation, the book provides: A critical review of FS methods, with particular emphasis on their current limitations Program files implementing major algorithms, together with the necessary instructions and datasets, available on a related Web site Coverage of the background and fundamental ideas behind FS A systematic presentation of the leading methods reviewed in a consistent algorithmic framework Real-world applications with worked examples that illustrate the power and efficacy of the FS approaches covered An investigation of the associated areas of FS, including rule induction and clustering methods using hybridizations of fuzzy and rough set theories Computational Intelligence and Feature Selection is an ideal resource for advanced undergraduates, postgraduates, researchers, and professional engineers. However, its straightforward presentation of the underlying concepts makes the book meaningful to specialists and nonspecialists alike.

A Practical Approach for Predictive Models Springer Nature

This book puts forward a new method for solving the text document (TD) clustering problem, which is established in two main stages: (i) A new feature selection method based on a particle swarm optimization algorithm with a novel weighting scheme is proposed, as well as a detailed dimension reduction technique, in order to obtain a new subset of more informative features with low-dimensional space. This new subset is subsequently used to improve the performance of the text

clustering (TC) algorithm and reduce its computation time. The k-mean clustering algorithm is used to evaluate the effectiveness of the obtained subsets. (ii) Four krill herd algorithms (KHAs), namely, the (a) basic KHA, (b) modified KHA, (c) hybrid KHA, and (d) multi-objective hybrid KHA, are proposed to solve the TC problem; each algorithm represents an incremental improvement on its predecessor. For the evaluation process, seven benchmark text datasets are used with different characterizations and complexities. Text document (TD) clustering is a new trend in text mining in which the TDs are separated into several coherent clusters, where all documents in the same cluster are similar. The findings presented here confirm that the proposed methods and algorithms delivered the best results in comparison with other, similar methods to be found in the literature.

Rough and Fuzzy Approaches Springer Science & Business Media
This book describes for the first time a simulation method for the fast calculation of contact properties and friction between rough surfaces in a complete form. In contrast to existing simulation methods, the method of dimensionality reduction (MDR) is based on the exact mapping of various types of three-dimensional contact problems onto contacts of one-dimensional foundations. Within the confines of MDR, not only are three dimensional systems reduced to one-dimensional, but also the resulting degrees of freedom are independent from another. Therefore, MDR results in an enormous reduction of the development time for the numerical implementation of contact problems as well as the direct computation time and can ultimately assume a similar role in tribology as FEM has in structure mechanics or CFD methods, in hydrodynamics. Furthermore, it substantially simplifies analytical calculation and presents a sort of “pocket book edition” of the entirety contact mechanics. Measurements of the rheology of bodies in contact as well as their surface topography and adhesive properties are the inputs of the calculations. In particular, it is possible to capture the entire dynamics of a system – beginning with the macroscopic, dynamic contact calculation all the way down to the influence of roughness – in a single numerical simulation model. Accordingly, MDR allows for the unification of the methods of solving contact problems on different scales. The goals of this book are on the one hand, to prove the applicability and reliability of the method and on the other hand, to explain its extremely simple application to those

interested.

PAKDD 2013 Workshops: DMAApps, DANTh, QIMIE, BDM, CDA, CloudSD, Golden Coast, QLD, Australia, Revised Selected Papers Springer

This book constitutes the refereed proceedings at PAKDD Workshops 2013, affiliated with the 17th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD) held in Gold Coast, Australia in April 2013. The 47 revised full papers presented were carefully reviewed and selected from 92 submissions. The workshops affiliated with PAKDD 2013 include: Data Mining Applications in Industry and Government (DMAApps), Data Analytics for Targeted Healthcare (DANTh), Quality Issues, Measures of Interestingness and Evaluation of Data Mining Models (QIMIE), Biologically Inspired Techniques for Data Mining (BDM), Constraint Discovery and Application (CDA), Cloud Service Discovery (CloudSD).

Computational Genomics with R Springer

This book presents the refereed proceedings of the 6th International Conference on Advanced Machine Learning Technologies and Applications (AMLTA 2021) held in Cairo, Egypt, during March 22–24, 2021, and organized by the Scientific Research Group of Egypt (SRGE). The papers cover current research Artificial Intelligence Against COVID-19, Internet of Things Healthcare Systems, Deep Learning Technology, Sentiment analysis, Cyber-Physical System, Health Informatics, Data Mining, Power and Control Systems, Business Intelligence, Social media, Control Design, and Smart Systems.

Exploring New Forms of Random Projections for Prediction and Dimensionality Reduction in Big-data Regimes Springer

Processing multimedia content has emerged as a key area for the application of machine learning techniques, where the objectives are to provide insight into the domain from which the data is drawn, and to organize that data and improve the performance of the processes manipulating it. Arising from the EU MUSCLE network, this multidisciplinary book provides a comprehensive coverage of the most important machine learning techniques used and their application in this domain.

A Guided Tour John Wiley & Sons

The digital age is ripe with emerging advances and applications in technological innovations. Mimicking the structure of complex systems in nature can provide new ideas on how to organize

mechanical and personal systems. The Handbook of Research on Modeling, Analysis, and Application of Nature-Inspired Metaheuristic Algorithms is an essential scholarly resource on current algorithms that have been inspired by the natural world. Featuring coverage on diverse topics such as cellular automata, simulated annealing, genetic programming, and differential evolution, this reference publication is ideal for scientists, biological engineers, academics, students, and researchers that are interested in discovering what models from nature influence the current technology-centric world.

Feature Engineering and Selection Springer Nature

The last few years have seen a great increase in the amount of data available to scientists, yet many of the techniques used to analyse this data cannot cope with such large datasets. Therefore, strategies need to be employed as a pre-processing step to reduce the number of objects or measurements whilst retaining important information. Spectral dimensionality reduction is one such tool for the data processing pipeline. Numerous algorithms and improvements have been proposed for the purpose of performing spectral dimensionality reduction, yet there is still no gold standard technique. This book provides a survey and reference aimed at advanced undergraduate and postgraduate students as well as researchers, scientists, and engineers in a wide range of disciplines. Dimensionality reduction has proven useful in a wide range of problem domains and so this book will be applicable to anyone with a solid grounding in statistics and computer science seeking to apply spectral dimensionality to their work.

9th International Conference on Practical Applications of

Computational Biology and Bioinformatics Springer Nature

This two volume set LNCS 10438 and LNCS 10439 constitutes the refereed proceedings of the 28th International Conference on Database and Expert Systems Applications, DEXA 2017, held in Lyon, France, August 2017. The 37 revised full papers presented

together with 40 short papers were carefully reviewed and selected from 166 submissions. The papers discuss a range of topics including: Semantic Web and Semantics; Graph Matching; Data Modeling, Data Abstraction, and Uncertainty; Preferences and Query Optimization; Data Integration and RDF Matching; Security and Privacy; Web Search; Data Clustering; Top-K and Skyline Queries; Data Mining and Big Data; Service Computing; Continuous and Temporal Data, and Continuous Query Language; Text Processing and Semantic Search; Indexing and Concurrency Control Methods; Data Warehouse and Data Stream Warehouse; Data Mining and Machine Learning; Recommender Systems and Query Recommendation; Graph Algorithms; Semantic Clustering and Data Classification.

Advanced Computing and Informatics Proceedings of the Second International Conference on Advanced Computing, Networking and Informatics (ICACNI-2014) Nonlinear Dimensionality Reduction

Data preparation involves transforming raw data in to a form that can be modeled using machine learning algorithms. Cut through the equations, Greek letters, and confusion, and discover the specialized data preparation techniques that you need to know to get the most out of your data on your next project. Using clear explanations, standard Python libraries, and step-by-step tutorial lessons, you will discover how to confidently and effectively prepare your data for predictive modeling with machine learning.

Foundations, Algorithms, and Applications CRC Press

This book constitutes the refereed proceedings of the 13th Iberoamerican Congress on Pattern Recognition, CIARP 2008, held in Havana, Cuba, in September 2008. The 93 revised full papers presented together with 3 keynote articles were carefully reviewed and selected from 182 submissions. The papers are organized in topical sections on signal analysis for characterization and filtering, analysis of shape and texture,

analysis of speech and language, data mining, clustering of images and documents, statistical pattern recognition, classification and description of objects, classification and edition, geometric image analysis, neural networks, computer vision, image coding, associative memories and neural networks, interpolation and video tracking, images analysis, music and speech analysis, as well as classifier combination and document filtering.

Computational Methods of Feature Selection Cambridge University Press

Nonlinear Dimensionality Reduction Springer Science & Business Media

Handbook of Research on Modeling, Analysis, and Application of Nature-Inspired Metaheuristic Algorithms Now Publishers Inc

Advanced Computing, Networking and Informatics are three distinct and mutually exclusive disciplines of knowledge with no apparent sharing/overlap among them. However, their convergence is observed in many real world applications, including cyber-security, internet banking, healthcare, sensor networks, cognitive radio, pervasive computing amidst many others. This two-volume proceedings explore the combined use of Advanced Computing and Informatics in the next generation wireless networks and security, signal and image processing, ontology and human-computer interfaces (HCI). The two volumes together include 148 scholarly papers, which have been accepted for presentation from over 640 submissions in the second International Conference on Advanced Computing, Networking and Informatics, 2014, held in Kolkata, India during June 24-26, 2014. The first volume includes innovative computing techniques and relevant research results in informatics with selective applications in pattern recognition, signal/image processing and HCI. The second volume on the other hand demonstrates the possible scope of the computing techniques and informatics in wireless communications, networking and security.