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RAMOS ALEXZANDER

High Performance Computing and Communications CRC Press

Praise for the First Edition " full of vivid and thought-provoking anecdotes needs to be read by anyone with a serious interest in research and marketing." —Research magazine "Shmueli et al. have done a wonderful job in presenting the field of data mining a welcome addition to the literature." —computingreviews.com Incorporating a new focus on data visualization and time series forecasting, *Data Mining for Business Intelligence, Second Edition* continues to supply insightful, detailed guidance on fundamental data mining techniques. This new edition guides readers through the use of the Microsoft Office Excel add-in XLMiner for developing predictive models and techniques for describing and finding patterns in data. From clustering customers into market segments and finding the characteristics of frequent flyers to learning what items are purchased with other items, the authors use interesting, real-world examples to build a theoretical and practical understanding of key data mining methods, including classification, prediction, and affinity analysis as well as data reduction, exploration, and visualization. The Second Edition now features: Three new chapters on time series forecasting, introducing popular business forecasting methods including moving average, exponential smoothing methods; regression-based models; and topics such as explanatory vs. predictive modeling, two-level models, and ensembles A revised chapter on data visualization that now features interactive visualization principles and added assignments that demonstrate interactive visualization in practice Separate chapters that each treat k-nearest neighbors and Naïve Bayes methods Summaries at the start of each chapter that supply an outline of key topics The book includes access to XLMiner, allowing readers to work hands-on with the provided data. Throughout the book, applications of the discussed topics focus on the business problem as motivation and avoid unnecessary statistical theory. Each chapter concludes with exercises that allow readers to assess their comprehension of the presented material. The final chapter includes a set of cases that require use of the different data mining techniques, and a related Web site features data sets, exercise solutions, PowerPoint slides, and case solutions. *Data Mining for Business Intelligence, Second Edition* is an excellent book for courses on data mining, forecasting, and decision support systems at the upper-undergraduate and graduate levels. It is also a one-of-a-kind resource for analysts, researchers, and practitioners working with quantitative methods in the fields of business, finance, marketing, computer science, and information technology.

Basic Matrix Algebra with Algorithms and Applications CRC Press

An applied approach to data mining and predictive analytics with clear exposition, hands-on exercises, and real-life case studies. Readers will work with all of the standard data mining methods using the Microsoft® Office Excel® add-in XLMiner® to develop predictive models and learn how to obtain business value from Big Data. Featuring updated topical coverage on text mining, social network analysis, collaborative filtering, ensemble methods, uplift modeling and more, the Third Edition also includes: Real-world examples to build a theoretical and practical understanding of key data mining methods End-of-chapter exercises that help readers better understand the presented material Data-rich case studies to illustrate various applications of data mining techniques Completely new chapters on social network analysis and text mining A companion site with additional data sets, instructors material that include solutions to exercises and case studies, and Microsoft PowerPoint® slides <https://www.dataminingbook.com> Free 140-day license to use XLMiner for Education software *Data Mining for Business Analytics: Concepts, Techniques, and Applications in XLMiner®, Third Edition* is an ideal textbook for upper-undergraduate and graduate-level courses as well as professional programs on data mining, predictive modeling, and Big Data analytics. The new edition is also a unique reference for analysts, researchers, and practitioners working with predictive analytics in the fields of business, finance, marketing, computer science, and information technology. Praise for the Second Edition "...full of vivid and thought-provoking anecdotes... needs to be read by anyone with a serious interest in research and marketing." - Research Magazine "Shmueli et al. have done a wonderful job in presenting the field of data mining - a welcome addition to the literature." - ComputingReviews.com "Excellent choice for business analysts...The book is a perfect fit for its intended audience." - Keith McCormick, Consultant and Author of *SPSS Statistics For Dummies, Third Edition* and *SPSS Statistics for Data Analysis and Visualization* Galit Shmueli, PhD, is Distinguished Professor at National Tsing Hua University's Institute of Service Science. She has designed and instructed data mining courses since 2004 at University of Maryland, Statistics.com, The Indian School of Business, and National Tsing Hua University, Taiwan. Professor Shmueli is known for her research and teaching in business analytics, with a focus on statistical and data mining methods in information systems and healthcare. She has authored over 70 journal articles, books, textbooks and book chapters. Peter C. Bruce is President and Founder of the Institute for Statistics Education at www.statistics.com. He has written multiple journal articles and is the developer of Resampling Stats software. He is the author of *Introductory Statistics and Analytics: A Resampling Perspective*, also published by Wiley. Nitin R. Patel, PhD, is Chairman and cofounder of Cytel, Inc., based in Cambridge, Massachusetts. A Fellow of the American Statistical Association, Dr. Patel has also served as a Visiting Professor at the Massachusetts Institute of Technology and at Harvard University. He is a Fellow of the Computer Society of India and was a professor at the Indian Institute of Management, Ahmedabad for 15 years.

Data Intelligence and Cognitive Informatics Springer

Each issue of *Transactions B* is devoted to a specific area of the biological sciences, including clinical science. All papers are peer reviewed and edited to the highest standards. Published on the 29th of each month, *Transactions B* is essential reading for all biologists.

Science on the Web Springer

This book is a collection of accepted papers that were presented at the International Conference on Communication and Computing Systems (ICCCS-2016), Dronacharya College of Engineering, Gurgaon, September 9-11, 2016. The purpose of the conference was to provide a platform for interaction between scientists from industry, academia and other areas of society to discuss the current advancements in the field of communication and computing systems. The papers submitted to the proceedings were peer-reviewed by 2-3 expert referees. This volume contains 5 main subject areas: 1. Signal and Image Processing, 2. Communication & Computer Networks, 3. Soft Computing, Intelligent System, Machine Vision and Artificial Neural Network, 4. VLSI & Embedded System, 5. Software Engineering and Emerging Technologies.

Learning Deep Architectures for AI John Wiley and Sons

The contemporary world lives on the data produced at an unprecedented speed through social networks and the internet of things (IoT). Data has been called the new global currency, and its rise is transforming entire industries, providing a wealth of opportunities. Applied data science research is necessary to derive useful information from big data for the effective and efficient utilization to solve real-world problems. A broad analytical set allied with strong business logic is fundamental in today's corporations. Organizations work to obtain competitive advantage by analyzing the data produced within and outside their organizational limits to support their decision-making processes. This book aims to provide an overview of the concepts, tools, and techniques behind the fields of data science and artificial intelligence (AI) applied to business and industries. The *Handbook of Research on Applied Data Science and Artificial Intelligence in Business and Industry* discusses all stages of data science to AI and their application to real problems across industries—from science and engineering to academia and commerce. This book brings together practice and science to build successful data solutions, showing how to uncover hidden patterns and leverage them to improve all aspects of business performance by making sense of data from both web and offline environments. Covering topics including applied AI, consumer behavior analytics, and machine learning, this text is essential for data scientists, IT specialists, managers, executives, software and computer engineers, researchers, practitioners, academicians, and students.

Advances in Biometrics Springer Science & Business Media

Combining scientific computing methods and algorithms with modern data analysis techniques, including basic applications of compressive sensing and machine learning, this book develops techniques that allow for the integration of the dynamics of complex systems and big data. MATLAB is used throughout for mathematical solution strategies.

Advances in Self-Organizing Maps and Learning Vector Quantization Springer

In contrast with previous books on mechatronics and machine vision in practice, a significant number of chapters focus on systems designed for human interaction and deciphering human motion. Examples illustrate assistive actuation of hip joints, the augmentation of touch sense in artificial hand prostheses and helping stroke survivors in repetitive motion therapy. Interactive mechatronics and the experience of developing machine interfaces has enabled an examination of how we use mechatronics in the service of training, and even to consider why computer games perhaps appear to capture attention so much more readily than a human instructor! Mechatronics continues to be an exciting and developing field. It is now an essential part of our world and living experience. This and the previous books in this series illustrate the journey in developing the use of mechatronics so far. We anticipate that you will find the chapters here an equal source of inspiration for new devices to solve the challenges of new applications, and of course as a resource for teaching and inspiring the new generation of mechatronics engineers.

Computer Analysis of Images and Patterns Springer Science & Business Media

The book provides an application-oriented overview of functional analysis, with extended and accessible presentations of key concepts such as spline basis functions, data smoothing, curve registration, functional linear models and dynamic systems Functional data analysis is put to work in a wide a range of applications, so that new problems are likely to find close analogues in this book The code in R and Matlab in the book has been designed to permit easy modification to adapt to new data structures and research problems

Foundations of Augmented Cognition John Wiley & Sons

This book constitutes the thoroughly refereed post-conference proceedings of the Second International Symposium on Intelligent Informatics (ISI 2013) held in Mysore, India during August 23-24, 2013. The 47 revised papers presented were carefully reviewed and selected from 126 initial submissions. The papers are organized in topical sections on pattern recognition, signal and image processing; data mining, clustering and intelligent information systems; multi agent systems; and computer networks and distributed systems. The book is directed to the researchers and scientists engaged in various fields of intelligent informatics.

Communication and Computing Systems Springer

This book covers the essential exploratory techniques for summarizing data with R. These techniques are typically applied before formal modeling commences and can help inform the development of more complex statistical models. Exploratory techniques are also important for eliminating or sharpening potential hypotheses about the world that can be addressed by the data you have. We will cover in detail the plotting systems in R as well as some of the basic principles of constructing informative data graphics. We will also cover some of the common multivariate statistical techniques used to visualize high-dimensional data. Some of the topics we cover are making exploratory graphs, principles of analytic graphics, plotting systems and graphics devices in R, the base and ggplot2 plotting systems in R, clustering methods, and dimension reduction techniques. (Quelle: buchcover).

Exploratory Data Analysis with R Springer Nature

Theoretical results suggest that in order to learn the kind of complicated functions that can represent high-level abstractions (e.g. in vision, language, and other AI-level tasks), one may need deep architectures. Deep architectures are composed of multiple levels of non-linear operations, such as in neural nets with many hidden layers or in complicated propositional formulae re-using many sub-formulae. Searching the parameter space of deep architectures is a difficult task, but learning algorithms such as those for Deep Belief Networks have recently been proposed to tackle this problem with notable success, beating the state-of-the-art in certain areas. This paper discusses the motivations and principles regarding learning algorithms for deep architectures, in particular those exploiting as building blocks unsupervised learning of single-layer models such as Restricted Boltzmann Machines, used to construct deeper models such as Deep Belief Networks.

Handbook of Computational Statistics Springer Science & Business Media

This book presents a statistical parametric speech synthesis (SPSS) framework for developing a speech synthesis system where the desired speech is generated from the parameters of vocal tract and excitation source. Throughout the book, the authors discuss novel source modeling techniques to enhance the naturalness and overall intelligibility of the SPSS system. This book provides several important methods and models for generating the excitation source parameters for enhancing the overall quality of synthesized speech. The contents of the book are useful for both researchers and system developers. For researchers, the book is useful for knowing the current state-of-the-art excitation source models for SPSS and further refining the source models to incorporate the realistic semantics present in the text. For system developers, the book is useful to integrate the sophisticated excitation source models mentioned to the latest models of mobile/smart phones.

Advances in Intelligent Data Analysis and Applications Springer

Bridging the gap between human-computer engineering and control engineering, Human Behavior Learning and Transfer delineates how to abstract human action and reaction skills into computational models. The authors include methods for modeling a variety of human action and reaction behaviors and explore processes for evaluating, optimizing, and trans

Modern Approaches in Machine Learning and Cognitive Science: A Walkthrough Springer

Many texts are excellent sources of knowledge about individual statistical tools, but the art of data analysis is about choosing and using multiple tools. Instead of presenting isolated techniques, this text emphasizes problem solving strategies that address the many issues arising when developing multivariable models using real data and not standard textbook examples. It includes imputation methods for dealing with missing data effectively, methods for dealing with nonlinear relationships and for making the estimation of transformations a formal part of the modeling process, methods for dealing with "too many variables to analyze and not enough observations," and powerful model validation techniques based on the bootstrap. This text realistically deals with model uncertainty and its effects on inference to achieve "safe data mining".

Advances in Computational Intelligence Springer

The World Wide Web is loaded with science and science-related material. For everyone who wants to learn more about this amazing resource, Ed Renehan has compiled this fun and informative guide to what's out there, what's interesting, what's new and who's doing it. Whether your interest is in artificial intelligence, Hubble Space Telescope images, or the latest dinosaur findings, the best sources and how to reach them are right here.

Functional Data Analysis with R and MATLAB Springer Science & Business Media

The Handbook of Computational Statistics: Concepts and Methodology is divided into four parts. It begins with an overview over the field of Computational Statistics. The second part presents several topics in the supporting field of statistical computing. Emphasis is placed on the need of fast and accurate numerical algorithms and it discusses some of the basic methodologies for transformation, data base handling and graphics treatment. The third part focuses on statistical methodology. Special attention is given to smoothing, iterative procedures, simulation and visualization of

multivariate data. Finally a set of selected applications like Bioinformatics, Medical Imaging, Finance and Network Intrusion Detection highlight the usefulness of computational statistics.

The Factorial Analysis of Human Ability Springer Nature

This book constitutes the refereed proceedings of the International Conference on Biometrics, ICB 2006, held in Hong Kong, China in January 2006. The book includes 104 revised full papers covering such areas of biometrics as the face, fingerprint, iris, speech and signature, biometric fusion and performance evaluation, gait, keystrokes, and more. In addition the results of the Face Authentication Competition (FAC 2006) are also announced in this volume.

Regression Modeling Strategies Oxford University Press

"Pattern Recognition, Machine Intelligence and Biometrics" covers the most recent developments in Pattern Recognition and its applications, using artificial intelligence technologies within an increasingly critical field. It covers topics such as: image analysis and fingerprint recognition; facial expressions and emotions; handwriting and signatures; iris recognition; hand-palm gestures; and multimodal based research. The applications span many fields, from engineering, scientific studies and experiments, to biomedical and diagnostic applications, to personal identification and homeland security. In addition, computer modeling and simulations of human behaviors are addressed in this collection of 31 chapters by top-ranked professionals from all over the world in the field of PR/AI/Biometrics. The book is intended for researchers and graduate students in Computer and Information Science, and in Communication and Control Engineering. Dr. Patrick S. P. Wang is a Professor Emeritus at the College of Computer and Information Science, Northeastern University, USA, Zijiang Chair of ECNU, Shanghai, and NSC Visiting Chair Professor of NTUST, Taipei.

Philosophical Transactions Springer Science & Business Media

Bringing together a comprehensive and diverse collection of research, theory, and thought, this volume builds a foundation for the new field of Augmented Cognition research and development. The first section introduces general Augmented Cognition methods and techniques, including physiological and neurophysiological measures such as EEG and fNIR; a

Data Mining for Business Intelligence Springer Science & Business Media

This modern approach integrates classical and contemporary methods, fusing theory and practice and bridging the gap to statistical learning.