
Data Mining With R Learning With Case Studies

Chapman Hall Crc Data Mining And Knowledge Discovery Series

Practical Machine Learning Tools and Techniques with Java Implementations
 Implement data mining techniques through practical use cases and real world datasets
 Principles and Practical Techniques
 Machine Learning for Data Streams
 A Tidy Approach
 Learning Path
 Hands-on Coding, Data Mining, Visualization and Statistics from Scratch
 R: Mining spatial, text, web, and social media data
 Global Perspectives on Quality, Support, and Decision Making
 Data Mining and Machine Learning in Cybersecurity
 Applications in Educational Research
 Introduction to Algorithms for Data Mining and Machine Learning
 Data Mining and Machine Learning Applications
 Discovering Knowledge in Data
 Supervised Machine Learning for Text Analysis in R
 The Art of Excavating Data for Knowledge Discovery
 Machine Learning and Data Mining in Pattern Recognition
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 Data Mining
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 Examples and Case Studies
 Learning with Case Studies, Second Edition
 A Tutorial-Based Primer, Second Edition
 Learning with Case Studies
 Data Mining and Data Warehousing
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 An Introduction to Statistical Learning
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 Data Mining, Inference, and Prediction
 Responsible Analytics and Data Mining in Education
 Import, Tidy, Transform, Visualize, and Model Data
 Text Mining with R
 Explained Using R
 The Elements of Statistical Learning
 Data Science Using Python and R
 Data Mining and Business Analytics with R
 R Data Mining
 Mining of Massive Datasets

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SHANIA BAILEE

Practical Machine Learning Tools and Techniques with Java Implementations Academic Press

Data Mining with R Learning with Case Studies, Second Edition CRC Press

Implement data mining techniques through practical use cases and real world datasets Springer Science & Business Media
 A hands-on approach to tasks and techniques in data stream mining and real-time analytics, with examples in MOA, a popular freely available open-source software framework. Today many information sources—including sensor networks, financial markets, social networks, and healthcare monitoring—are so-called data streams, arriving sequentially and at high speed.

Analysis must take place in real time, with partial data and without the capacity to store the entire data set. This book presents algorithms and techniques used in data stream mining and real-time analytics. Taking a hands-on approach, the book demonstrates the techniques using MOA (Massive Online Analysis), a popular, freely available open-source software framework, allowing readers to try out the techniques after reading the explanations. The book first offers a brief introduction to the topic, covering big data mining, basic methodologies for mining data streams, and a simple example of MOA. More detailed discussions follow, with chapters on sketching techniques, change, classification, ensemble methods, regression, clustering, and frequent pattern mining. Most of these chapters include exercises, an MOA-based lab session, or both. Finally, the book discusses the MOA software, covering the MOA graphical user interface, the command line, use of its API, and the development of new methods within MOA. The book will be an

essential reference for readers who want to use data stream mining as a tool, researchers in innovation or data stream mining, and programmers who want to create new algorithms for MOA.

Principles and Practical Techniques CRC Press

This book offers a thorough grounding in machine learning concepts combined with practical advice on applying machine learning tools and techniques in real-world data mining situations. Clearly written and effectively illustrated, this book is ideal for anyone involved at any level in the work of extracting usable knowledge from large collections of data. Complementing the book's instruction is fully functional machine learning software.

Machine Learning for Data Streams John Wiley & Sons
Data Mining and Analytics provides a broad and interactive overview of a rapidly growing field. The exponentially increasing rate at which data is generated creates a corresponding need for professionals who can effectively handle its storage, analysis, and translation.

A Tidy Approach "O'Reilly Media, Inc."

Winner of two Outstanding Book Awards from the Association of Educational Communications and Technology (Culture, Learning, & Technology and Systems Thinking & Change divisions)! Rapid advancements in our ability to collect, process, and analyze massive amounts of data along with the widespread use of online and blended learning platforms have enabled educators at all levels to gain new insights into how people learn. Responsible Analytics and Data Mining in Education addresses the thoughtful and purposeful navigation, evaluation, and implementation of these emerging forms of educational data analysis. Chapter authors from around the world explore how data analytics can be used to improve course and program quality; how the data and its interpretations may inadvertently impact students, faculty, and institutions; the quality and reliability of data, as well as the accuracy of data-based decisions; ethical implications surrounding the collection, distribution, and use of student-generated data; and more. This volume unpacks and explores this complex issue through a systematic framework whose dimensions address the issues that must be considered before implementation of a new initiative or program.

Learning Path Cambridge University Press

Good data mining practice for business intelligence (the art of turning raw software into meaningful information) is demonstrated by the many new techniques and developments in the conversion of fresh scientific discovery into widely accessible software solutions. Written as an introduction to the main issues associated with the basics of machine learning and the algorithms used in data mining, this text is suitable for advanced undergraduates, postgraduates and tutors in a wide area of computer science and technology, as well as researchers looking to adapt various algorithms for particular data mining tasks. A valuable addition to libraries and bookshelves of the many companies who are using the principles of data mining to effectively deliver solid business and industry solutions.

Hands-on Coding, Data Mining, Visualization and Statistics from Scratch River Publishers

With big data analytics comes big insights into profitability. Big data is big business. But having the data and the computational power to process it isn't nearly enough to produce meaningful results. *Big Data, Data Mining, and Machine Learning: Value Creation for Business Leaders and Practitioners* is a complete resource for technology and marketing executives looking to cut through the hype and produce real results that hit the bottom line. Providing an engaging, thorough overview of the current state of big data analytics and the growing trend toward high performance computing architectures, the book is a detail-driven

look into how big data analytics can be leveraged to foster positive change and drive efficiency. With continued exponential growth in data and ever more competitive markets, businesses must adapt quickly to gain every competitive advantage available. Big data analytics can serve as the linchpin for initiatives that drive business, but only if the underlying technology and analysis is fully understood and appreciated by engaged stakeholders. This book provides a view into the topic that executives, managers, and practitioners require, and includes: A complete overview of big data and its notable characteristics Details on high performance computing architectures for analytics, massively parallel processing (MPP), and in-memory databases Comprehensive coverage of data mining, text analytics, and machine learning algorithms A discussion of explanatory and predictive modeling, and how they can be applied to decision-making processes *Big Data, Data Mining, and Machine Learning* provides technology and marketing executives with the complete resource that has been notably absent from the veritable libraries of published books on the topic. Take control of your organization's big data analytics to produce real results with a resource that is comprehensive in scope and light on hyperbole.

Springer Science & Business Media

This book is intended for the budding data scientist or quantitative analyst with only a basic exposure to R and statistics. This book assumes familiarity with only the very basics of R, such as the main data types, simple functions, and how to move data around. No prior experience with data mining packages is necessary; however, you should have a basic understanding of data mining concepts and processes.

R: Mining spatial, text, web, and social media data

Horwood Publishing

Data Mining with R: Learning with Case Studies, Second Edition uses practical examples to illustrate the power of R and data mining. Providing an extensive update to the best-selling first edition, this new edition is divided into two parts. The first part will feature introductory material, including a new chapter that provides an introduction to data mining, to complement the already existing introduction to R. The second part includes case studies, and the new edition strongly revises the R code of the case studies making it more up-to-date with recent packages that have emerged in R. The book does not assume any prior knowledge about R. Readers who are new to R and data mining should be able to follow the case studies, and they are designed to be self-contained so the reader can start anywhere in the document. The book is accompanied by a set of freely available R source files that can be obtained at the book's web site. These files include all the code used in the case studies, and they facilitate the "do-it-yourself" approach followed in the book. Designed for users of data analysis tools, as well as researchers and developers, the book should be useful for anyone interested in entering the "world" of R and data mining. About the Author Luís Torgo is an associate professor in the Department of Computer Science at the University of Porto in Portugal. He teaches Data Mining in R in the NYU Stern School of Business' MS in Business Analytics program. An active researcher in machine learning and data mining for more than 20 years, Dr. Torgo is also a researcher in the Laboratory of Artificial Intelligence and Data Analysis (LIAAD) of INESC Porto LA.

Global Perspectives on Quality, Support, and Decision Making CRC Press

Now in its second edition, this book focuses on practical algorithms for mining data from even the largest datasets. *Data Mining and Machine Learning in Cybersecurity* Data Mining with R Learning with Case Studies, Second Edition

During the past decade there has been an explosion in computation and information technology. With it have come vast amounts of data in a variety of fields such as medicine, biology, finance, and marketing. The challenge of understanding these data has led to the development of new tools in the field of statistics, and spawned new areas such as data mining, machine learning, and bioinformatics. Many of these tools have common underpinnings but are often expressed with different terminology. This book describes the important ideas in these areas in a common conceptual framework. While the approach is statistical, the emphasis is on concepts rather than mathematics. Many examples are given, with a liberal use of color graphics. It should be a valuable resource for statisticians and anyone interested in data mining in science or industry. The book's coverage is broad, from supervised learning (prediction) to unsupervised learning. The many topics include neural networks, support vector machines, classification trees and boosting--the first comprehensive treatment of this topic in any book. This major new edition features many topics not covered in the original, including graphical models, random forests, ensemble methods, least angle regression & path algorithms for the lasso, non-negative matrix factorization, and spectral clustering. There is also a chapter on methods for "wide" data (p bigger than n), including multiple testing and false discovery rates. Trevor Hastie, Robert Tibshirani, and Jerome Friedman are professors of statistics at Stanford University. They are prominent researchers in this area: Hastie and Tibshirani developed generalized additive models and wrote a popular book of that title. Hastie co-developed much of the statistical modeling software and environment in R/S-PLUS and invented principal curves and surfaces. Tibshirani proposed the lasso and is co-author of the very successful *An Introduction to the Bootstrap*. Friedman is the co-inventor of many data-mining tools including CART, MARS, projection pursuit and gradient boosting.

Applications in Educational Research Packt Publishing Ltd

The fundamental algorithms in data mining and machine learning form the basis of data science, utilizing automated methods to analyze patterns and models for all kinds of data in applications ranging from scientific discovery to business analytics. This textbook for senior undergraduate and graduate courses provides a comprehensive, in-depth overview of data mining, machine learning and statistics, offering solid guidance for students, researchers, and practitioners. The book lays the foundations of data analysis, pattern mining, clustering, classification and regression, with a focus on the algorithms and the underlying algebraic, geometric, and probabilistic concepts. New to this second edition is an entire part devoted to regression methods, including neural networks and deep learning.

Introduction to Algorithms for Data Mining and Machine Learning Academic Press

Extensive treatment of the most up-to-date topics Provides the theory and concepts behind popular and emerging methods Range of topics drawn from Statistics, Computer Science, and Electrical Engineering

Data Mining and Machine Learning Applications Routledge

With the rapid advancement of information discovery techniques, machine learning and data mining continue to play a significant role in cybersecurity. Although several conferences, workshops, and journals focus on the fragmented research topics in this area, there has been no single interdisciplinary resource on past and current works and possible

Discovering Knowledge in Data Elsevier

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* *Supervised Machine Learning for Text Analysis in R* Wiley-Scrivener

Addresses the impacts of data mining on education and reviews applications in educational research teaching, and learning This book discusses the insights, challenges, issues, expectations, and practical implementation of data mining (DM) within educational mandates. Initial series of chapters offer a general overview of DM, Learning Analytics (LA), and data collection models in the context of educational research, while also defining and discussing data mining's four guiding principles— prediction, clustering, rule association, and outlier detection. The next series of chapters showcase the pedagogical applications of Educational Data Mining (EDM) and feature case studies drawn from Business, Humanities, Health Sciences, Linguistics, and Physical Sciences education that serve to highlight the successes and some of the limitations of data mining research applications in educational settings. The remaining chapters focus exclusively on EDM's emerging role in helping to advance educational research—from identifying at-risk students and closing socioeconomic gaps in achievement to aiding in teacher evaluation and facilitating peer conferencing. This book features contributions from international experts in a variety of fields. Includes case studies where data mining techniques have been effectively applied to advance teaching and learning Addresses applications of data mining in educational research, including: social networking and education; policy and legislation in the classroom; and identification of at-risk students Explores Massive Open Online Courses (MOOCs) to study the effectiveness of online networks in promoting learning

and understanding the communication patterns among users and students. Features supplementary resources including a primer on foundational aspects of educational mining and learning analytics. *Data Mining and Learning Analytics: Applications in Educational Research* is written for both scientists in EDM and educators interested in using and integrating DM and LA to improve education and advance educational research.

The Art of Excavating Data for Knowledge Discovery John Wiley & Sons

Data Mining: A Tutorial-Based Primer, Second Edition provides a comprehensive introduction to data mining with a focus on model building and testing, as well as on interpreting and validating results. The text guides students to understand how data mining can be employed to solve real problems and recognize whether a data mining solution is a feasible alternative for a specific problem. Fundamental data mining strategies, techniques, and evaluation methods are presented and implemented with the help of two well-known software tools. Several new topics have been added to the second edition including an introduction to Big Data and data analytics, ROC curves, Pareto lift charts, methods for handling large-sized, streaming and imbalanced data, support vector machines, and extended coverage of textual data mining. The second edition contains tutorials for attribute selection, dealing with imbalanced data, outlier analysis, time series analysis, mining textual data, and more. The text provides in-depth coverage of RapidMiner Studio and Weka's Explorer interface. Both software tools are used for stepping students through the tutorials depicting the knowledge discovery process. This allows the reader maximum flexibility for their hands-on data mining experience.

Machine Learning and Data Mining in Pattern Recognition John Wiley & Sons

The versatile capabilities and large set of add-on packages make R an excellent alternative to many existing and often expensive data mining tools. Exploring this area from the perspective of a practitioner, *Data Mining with R: Learning with Case Studies* uses practical examples to illustrate the power of R and data mining. Assuming no prior knowledge of R or data mining/statistical techniques, the book covers a diverse set of problems that pose different challenges in terms of size, type of data, goals of analysis, and analytical tools. To present the main data mining processes and techniques, the author takes a hands-on approach that utilizes a series of detailed, real-world case studies: Predicting algae blooms Predicting stock market returns Detecting fraudulent transactions Classifying microarray samples With these case studies, the author supplies all necessary steps, code, and data. Web Resource A supporting website mirrors the do-it-yourself approach of the text. It offers a collection of freely

available R source files that encompass all the code used in the case studies. The site also provides the data sets from the case studies as well as an R package of several functions.

Data Mining with R Taylor & Francis

Collecting, analyzing, and extracting valuable information from a large amount of data requires easily accessible, robust, computational and analytical tools. *Data Mining and Business Analytics with R* utilizes the open source software R for the analysis, exploration, and simplification of large high-dimensional data sets. As a result, readers are provided with the needed guidance to model and interpret complicated data and become adept at building powerful models for prediction and classification. Highlighting both underlying concepts and practical computational skills, *Data Mining and Business Analytics with R* begins with coverage of standard linear regression and the importance of parsimony in statistical modeling. The book includes important topics such as penalty-based variable selection (LASSO); logistic regression; regression and classification trees; clustering; principal components and partial least squares; and the analysis of text and network data. In addition, the book presents:

- A thorough discussion and extensive demonstration of the theory behind the most useful data mining tools
- Illustrations of how to use the outlined concepts in real-world situations
- Readily available additional data sets and related R code allowing readers to apply their own analyses to the discussed materials
- Numerous exercises to help readers with computing skills and deepen their understanding of the material

Data Mining and Business Analytics with R is an excellent graduate-level textbook for courses on data mining and business analytics. The book is also a valuable reference for practitioners who collect and analyze data in the fields of finance, operations management, marketing, and the information sciences.

Data Mining MIT Press

This textbook offers an easy-to-follow, practical guide to modern data analysis using the programming language R. The chapters cover topics such as the fundamentals of programming in R, data collection and preprocessing, including web scraping, data visualization, and statistical methods, including multivariate analysis, and feature exercises at the end of each section. The text requires only basic statistics skills, as it strikes a balance between statistical and mathematical understanding and implementation in R, with a special emphasis on reproducible examples and real-world applications. This textbook is primarily intended for undergraduate students of mathematics, statistics, physics, economics, finance and business who are pursuing a career in data analytics. It will be equally valuable for master students of data science and industry professionals who want to conduct data analyses.