Free ebook Mathematical statistics with applications in r second edition (PDF)

Advanced R, Second Edition Statistical Testing with R Data Analysis with R, Second Edition Deep Learning with R, Second Edition R Graphs Cookbook Second Edition Generalized Additive Models Statistical Computing with R, Second Edition Linear Models with R, Second Edition The R Book Probability and Statistics with R A Handbook of Statistical Analyses Using R, Second Edition Robust Statistical Methods with R, Second Edition Learning Base R, Second Edition Getting Your Feet Wet with R Practical Data Science with R, Second Edition Mastering Machine Learning with R, Second Edition Hidden Markov Models for Time Series R Primer, Second Edition Multivariate Generalized Linear Mixed Models Using R, Second Edition Using R for Introductory Statistics, Second Edition R Data Analysis Cookbook, Second Edition Handbook of Regression Analysis With Applications in R Analyzing Baseball Data with R, Second Edition Combinatorics of Permutations, Second Edition Basic Probability: What Every Math Student Should Know (Second Edition) Interpretation of Bloodstain Evidence at Crime Scenes, Second Edition Reproducible Research with R and R Studio, Second Edition Bayesian Hierarchical Models Data Mining with R Ad Hoc and Sensor Networks Excel and R Companion to the Second Edition of Quantifying the User Experience Advanced R Solutions Statistics in Engineering Flexible Imputation of Missing Data, Second Edition Programming in C, 2nd Edition Choose your WoW - Second Edition (JAPANESE) Applied Time Series Analysis with R Stochastic Processes with R Analyzing Sensory Data with R Environmental Statistics with R and S-Plus Second Edition

Advanced R, Second Edition

2019-05-24

advanced r helps you understand how r works at a fundamental level it is designed for r programmers who want to deepen their understanding of the language and programmers experienced in other languages who want to understand what makes r different and special this book will teach you the foundations of r three fundamental programming paradigms functional object oriented and metaprogramming and powerful techniques for debugging and optimising your code by reading this book you will learn the difference between an object and its name and why the distinction is important the important vector data structures how they fit together and how you can pull them apart using subsetting the fine details of functions and environments the condition system which powers messages warnings and errors the powerful functional programming paradigm which can replace many for loops the three most important oo systems s3 s4 and r6 the tidy eval toolkit for metaprogramming which allows you to manipulate code and control evaluation effective debugging techniques that you can deploy regardless of how your code is run how to find and remove performance bottlenecks the second edition is a comprehensive update new foundational chapters names and values control flow and conditions comprehensive coverage of object oriented programming with chapters on s3 s4 r6 and how to choose between them much deeper coverage of metaprogramming including the new tidy evaluation framework use of new package like rlang rlang r lib org which provides a clean interface to low level operations and purr purrr tidyverse org for functional programming use of color in code chunks and figures hadley wickham is chief scientist at rstudio an adjunct professor at stanford university and the university of auckland and a member of the r foundation he is the lead developer of the tidyverse a collection of r packages including ggplot2 and dplyr designed to support data science he is also the author of r for data science with garrett grolemund r packages and ggplot2 elegant graphics for data analysis

Statistical Testing with R

2022-06

features worked examples from the behavioral and social sciences clearly written without mathematical formulae well structured for beginners and intermediate readers assumes no knowledge of r or programming coding comprehensive chapter on categorical analysis not just chi squared effect sizes and confidence intervals clear explanation of factor analysis covers manova cluster analysis logistic regression survival analysis and partial correlations introduces bayesian statistics reproduces a well received short chapter on making presentations data sets exercises and case studies on the website

Data Analysis with R, Second Edition

2018-03-28

learn by example the fundamentals of data analysis as well as several intermediate to advanced methods and techniques ranging from classification and regression to bayesian methods and mcmc which can be put to immediate use key features analyze your data using r the most powerful statistical programming language learn how to implement applied statistics using practical use cases use popular r packages to work with unstructured and structured data book description frequently the tool of choice for academics r has spread deep into the private sector and can be found in the production pipelines at some of the most advanced and successful enterprises the power and domain specificity of r allows the user to express complex analytics easily quickly and succinctly starting with the basics of r and statistical reasoning this book dives into advanced predictive analytics showing how to apply those techniques to real world data though with real world examples packed with engaging problems and exercises this book begins with a review of r and its syntax with packages like rcpp ggplot2 and dplyr from there get to grips with the fundamentals of applied statistics and build on this knowledge to perform sophisticated and powerful analytics solve the difficulties relating to performing data

analysis in practice and find solutions to working with messy data large data communicating results and facilitating reproducibility this book is engineered to be an invaluable resource through many stages of anyone s career as a data analyst what you will learn gain a thorough understanding of statistical reasoning and sampling theory employ hypothesis testing to draw inferences from your data learn bayesian methods for estimating parameters train regression classification and time series models handle missing data gracefully using multiple imputation identify and manage problematic data points learn how to scale your analyses to larger data with rcpp data table dplyr and parallelization put best practices into effect to make your job easier and facilitate reproducibility who this book is for budding data scientists and data analysts who are new to the concept of data analysis or who want to build efficient analytical models in r will find this book to be useful no prior exposure to data analysis is needed although a fundamental understanding of the r programming language is required to get the best out of this book

Deep Learning with R, Second Edition

2022-09-13

deep learning from the ground up using r and the powerful keras library in deep learning with r second edition you will learn deep learning from first principles image classification and image segmentation time series forecasting text classification and machine translation text generation neural style transfer and image generation deep learning with r second edition shows you how to put deep learning into action it s based on the revised new edition of françois chollet s bestselling deep learning with python all code and examples have been expertly translated to the r language by tomasz kalinowski who maintains the keras and tensorflow r packages at rstudio novices and experienced ml practitioners will love the expert insights practical techniques and important theory for building neural networks about the technology deep learning has become essential knowledge for data scientists researchers and software developers the r language apis for keras and tensorflow put deep learning within reach for all r users even if they have no experience with advanced machine learning or neural networks this book shows you how to get started on core dl tasks like computer vision natural

language processing and more using r about the book deep learning with r second edition is a hands on guide to deep learning using the r language as you move through this book you ll quickly lock in the foundational ideas of deep learning the intuitive explanations crisp illustrations and clear examples guide you through core dl skills like image processing and text manipulation and even advanced features like transformers this revised and expanded new edition is adapted from deep learning with python second edition by françois chollet the creator of the keras library what s inside image classification and image segmentation time series forecasting text classification and machine translation text generation neural style transfer and image generation about the reader for readers with intermediate r skills no previous experience with keras tensorflow or deep learning is required about the author françois chollet is a software engineer at google and creator of keras tomasz kalinowski is a software engineer at rstudio and maintainer of the keras and tensorflow r packages j j allaire is the founder of rstudio and the author of the first edition of this book table of contents 1 what is deep learning 2 the mathematical building blocks of neural networks 3 introduction to keras and tensorflow 4 getting started with neural networks classification and regression 5 fundamentals of machine learning 6 the universal workflow of machine learning 7 working with keras a deep dive 8 introduction to deep learning for computer vision 9 advanced deep learning for computer vision 10 deep learning for time series 11 deep learning for text 12 generative deep learning 13 best practices for the real world 14 conclusions

R Graphs Cookbook Second Edition

2014-10-28

targeted at those with an existing familiarity with r programming this practical guide will appeal directly to programmers interested in learning effective data visualization techniques with r and a wide range of its associated libraries

Generalized Additive Models

2017-05-18

the first edition of this book has established itself as one of the leading references on generalized additive models gams and the only book on the topic to be introductory in nature with a wealth of practical examples and software implementation it is self contained providing the necessary background in linear models linear mixed models and generalized linear models glms before presenting a balanced treatment of the theory and applications of gams and related models the author bases his approach on a framework of penalized regression splines and while firmly focused on the practical aspects of gams discussions include fairly full explanations of the theory underlying the methods use of r software helps explain the theory and illustrates the practical application of the methodology each chapter contains an extensive set of exercises with solutions in an appendix or in the book s r data package gamair to enable use as a course text or for self study simon n wood is a professor of statistical science at the university of bristol uk and author of the r package mgcv

Statistical Computing with R, Second Edition

2019-02-21

computational statistics and statistical computing are two areas that employ computational graphical and numerical approaches to solve statistical problems making the versatile r language an ideal computing environment for these fields this second edition continues to encompass the traditional core material of computational statistics with an

Linear Models with R, Second Edition

2014-07-01

a hands on way to learning data analysis part of the core of statistics linear models are used to make predictions and explain the relationship between the response and the predictors understanding linear models is crucial to a broader competence in the practice of statistics linear models with r second edition explains how to use linear models in physical science engineering social science and business applications the book incorporates several improvements that reflect how the world of r has greatly expanded since the publication of the first edition new to the second edition reorganized material on interpreting linear models which distinguishes the main applications of prediction and explanation and introduces elementary notions of causality additional topics including qr decomposition splines additive models lasso multiple imputation and false discovery rates extensive use of the ggplot2 graphics package in addition to base graphics like its widely praised best selling predecessor this edition combines statistics and r to seamlessly give a coherent exposition of the practice of linear modeling the text offers up to date insight on essential data analysis topics from estimation inference and prediction to missing data factorial models and block designs numerous examples illustrate how to apply the different methods using r

The R Book

2012-11-07

hugely successful and popular text presenting an extensive and comprehensive guide for all r users the r language is recognized as one of the most powerful and flexible statistical software packages enabling users to apply many statistical techniques that would be impossible without such software to help implement such large data sets r has become an essential tool for understanding and carrying out research this edition features full colour text and extensive graphics throughout introduces a clear structure with numbered section headings to

help readers locate information more efficiently looks at the evolution of r over the past five years features a new chapter on bayesian analysis and meta analysis presents a fully revised and updated bibliography and reference section is supported by an accompanying website allowing examples from the text to be run by the user praise for the first edition if you are an r user or wannabe r user this text is the one that should be on your shelf the breadth of topics covered is unsurpassed when it comes to texts on data analysis in r the american statistician august 2008 the high level software language of r is setting standards in quantitative analysis and now anybody can get to grips with it thanks to the r book professional pensions july 2007

Probability and Statistics with R

2015-07-21

cohesively incorporates statistical theory with r implementationsince the publication of the popular first edition of this comprehensive textbook the contributed r packages on cran have increased from around 1 000 to over 6 000 designed for an intermediate undergraduate course probability and statistics with r second edition explores how some o

A Handbook of Statistical Analyses Using R, Second Edition

2009-07-20

a proven guide for easily using r to effectively analyze data like its bestselling predecessor a handbook of statistical analyses using r second edition provides a guide to data analysis using the r system for statistical computing each chapter includes a brief account of the relevant statistical background along with appropriate references new to the second edition new chapters on graphical displays generalized additive models and simultaneous inference a new section on generalized linear mixed models that completes the discussion on the analysis of longitudinal data where the response variable does not have a normal distribution new examples and

additional exercises in several chapters a new version of the hsaur package hsaur2 which is available from cran this edition continues to offer straightforward descriptions of how to conduct a range of statistical analyses using r from simple inference to recursive partitioning to cluster analysis focusing on how to use r and interpret the results it provides students and researchers in many disciplines with a self contained means of using r to analyze their data

Robust Statistical Methods with R, Second Edition

2019-05-29

the second edition of robust statistical methods with r provides a systematic treatment of robust procedures with an emphasis on new developments and on the computational aspects there are many numerical examples and notes on the r environment and the updated chapter on the multivariate model contains additional material on visualization of multivariate data in r a new chapter on robust procedures in measurement error models concentrates mainly on the rank procedures less sensitive to errors than other procedures this book will be an invaluable resource for researchers and postgraduate students in statistics and mathematics features provides a systematic practical treatment of robust statistical methods offers a rigorous treatment of the whole range of robust methods including the sequential versions of estimators their moment convergence and compares their asymptotic and finite sample behavior the extended account of multivariate models includes the admissibility shrinkage effects and unbiasedness of two sample tests illustrates the small sensitivity of the rank procedures in the measurement error model emphasizes the computational aspects supplies many examples and illustrations and provides the own procedures of the authors in the r software on the book s website

Learning Base R, Second Edition

2021-11-22

learning base r provides an introduction to the r language for those with or without prior programming experience

Getting Your Feet Wet with R

2019

would you love to learn new statistical programming language this book will help you learn the basics with r programming and get you acclimated to the r environment and idiosyncrasies that come with learning r learn how to import your data and learn statistics commands within the software

Practical Data Science with R, Second Edition

2020

providing numerous tools modeling techniques and real world use cases this invaluable resource takes a practice oriented approach to explaining basic principles in the ever expanding field of data science

Mastering Machine Learning with R, Second Edition

2017-04-20

master machine learning techniques with r to deliver insights in complex projectsabout this book understand and apply machine learning methods using an extensive set of r packages such as xgboost understand the benefits and potential pitfalls of using machine learning methods such as multi class classification and unsupervised learning implement advanced concepts in machine learning with this example rich guidewho this book is forthis book is for data science professionals data analysts or anyone with a working knowledge of

machine learning with r who now want to take their skills to the next level and become an expert in the field what you will learn gain deep insights into the application of machine learning tools in the industry manipulate data in r efficiently to prepare it for analysis master the skill of recognizing techniques for effective visualization of data understand why and how to create test and training data sets for analysis master fundamental learning methods such as linear and logistic regression comprehend advanced learning methods such as support vector machines learn how to use r in a cloud service such as amazonin detailthis book will teach you advanced techniques in machine learning with the latest code in r 3 3 2 you will delve into statistical learning theory and supervised learning design efficient algorithms learn about creating recommendation engines use multi class classification and deep learning and more you will explore in depth topics such as data mining classification clustering regression predictive modeling anomaly detection boosted trees with xgboost and more more than just knowing the outcome you ll understand how these concepts work and what they do with a slow learning curve on topics such as neural networks you will explore deep learning and more by the end of this book you will be able to perform machine learning with r in the cloud using aws in various scenarios with different datasets style and approachthe book delivers practical and real world solutions to problems and a variety of tasks such as complex recommendation systems by the end of this book you will have gained expertise in performing r machine learning and will be able to build complex machine learning projects using r and its packages

Hidden Markov Models for Time Series

2017-12-19

hidden markov models for time series an introduction using r second edition illustrates the great flexibility of hidden markov models hmms as general purpose models for time series data the book provides a broad understanding of the models and their uses after presenting the basic model formulation the book covers estimation forecasting decoding prediction model selection and bayesian inference for hmms through examples and applications the authors describe how to extend and generalize the basic model so that it can be applied in

a rich variety of situations the book demonstrates how hmms can be applied to a wide range of types of time series continuous valued circular multivariate binary bounded and unbounded counts and categorical observations it also discusses how to employ the freely available computing environment r to carry out the computations features presents an accessible overview of hmms explores a variety of applications in ecology finance epidemiology climatology and sociology includes numerous theoretical and programming exercises provides most of the analysed data sets online new to the second edition a total of five chapters on extensions including hmms for longitudinal data hidden semi markov models and models with continuous valued state process new case studies on animal movement rainfall occurrence and capture recapture data

R Primer, Second Edition

2017-02-24

newcomers to r are often intimidated by the command line interface the vast number of functions and packages or the processes of importing data and performing a simple statistical analysis the r primer provides a collection of concise examples and solutions to r problems frequently encountered by new users of this statistical software this new edition adds coverage of r studio and reproducible research

Multivariate Generalized Linear Mixed Models Using R, Second Edition

2017

this book provides a foundation for the application of methods for analyzing multivariate generalized linear mixed models using r it covers the necessary background in glms mixed models and multivariate data analysis and combines them to provide methodology for mglms it has a practical focus with examples throughout a

supplementary r package for all the models and detailed case studies the second edition has been updated with an r package for all models and more detailed case studies provided by publisher

Using R for Introductory Statistics, Second Edition

2014-06-26

the second edition of a bestselling textbook using r for introductory statistics guides students through the basics of r helping them overcome the sometimes steep learning curve the author does this by breaking the material down into small task oriented steps the second edition maintains the features that made the first edition so popular while updating data examples and changes to r in line with the current version see what s new in the second edition increased emphasis on more idiomatic r provides a grounding in the functionality of base r discussions of the use of rstudio helps new r users avoid as many pitfalls as possible use of knitr package makes code easier to read and therefore easier to reason about additional information on computer intensive approaches motivates the traditional approach updated examples and data make the information current and topical the book has an accompanying package usingr available from cran r s repository of user contributed packages the package contains the data sets mentioned in the text data package usingr answers to selected problems answers a few demonstrations demo the errata errata and sample code from the text the topics of this text line up closely with traditional teaching progression however the book also highlights computer intensive approaches to motivate the more traditional approach the authors emphasize realistic data and examples and rely on visualization techniques to gather insight they introduce statistics and r seamlessly giving students the tools they need to use r and the information they need to navigate the sometimes complex world of statistical computing

R Data Analysis Cookbook, Second Edition

2017-09-20

over 80 recipes to help you breeze through your data analysis projects using rabout this book analyse your data using the popular r packages like ggplot2 with ready to use and customizable recipes find meaningful insights from your data and generate dynamic reports a practical guide to help you put your data analysis skills in r to practical usewho this book is forthis book is for data scientists analysts and even enthusiasts who want to learn and implement the various data analysis techniques using r in a practical way those looking for quick handy solutions to common tasks and challenges in data analysis will find this book to be very useful basic knowledge of statistics and r programming is assumed what you will learn acquire format and visualize your data using r using r to perform an exploratory data analysis introduction to machine learning algorithms such as classification and regression get started with social network analysis generate dynamic reporting with shiny get started with geospatial analysis handling large data with r using spark and mongodb build recommendation system collaborative filtering content based and hybrid learn real world dataset examples fraud detection and image recognitionin detaildata analytics with r has emerged as a very important focus for organizations of all kinds r enables even those with only an intuitive grasp of the underlying concepts without a deep mathematical background to unleash powerful and detailed examinations of their data this book will show you how you can put your data analysis skills in r to practical use with recipes catering to the basic as well as advanced data analysis tasks right from acquiring your data and preparing it for analysis to the more complex data analysis techniques the book will show you how you can implement each technique in the best possible manner you will also visualize your data using the popular r packages like ggplot2 and gain hidden insights from it starting with implementing the basic data analysis concepts like handling your data to creating basic plots you will master the more advanced data analysis techniques like performing cluster analysis and generating effective analysis reports and visualizations throughout the book you will get to know the common problems and obstacles you might encounter while implementing each of the data analysis techniques in r with ways to overcoming them in the easiest possible way by the end of this book you will have all the knowledge you need to become an expert

in data analysis with r and put your skills to test in real world scenarios style and approach hands on recipes to walk through data science challenges using r your one stop solution for common and not so common pain points while performing real world problems to execute a series of tasks addressing your common and not so common pain points this is a book that you must have on the shelf

Handbook of Regression Analysis With Applications in R

2020-08-18

handbook and reference guide for students and practitioners of statistical regression based analyses in r handbook of regression analysis with applications in r second edition is a comprehensive and up to date guide to conducting complex regressions in the r statistical programming language the authors thorough treatment of classical regression analysis in the first edition is complemented here by their discussion of more advanced topics including time to event survival data and longitudinal and clustered data the book further pays particular attention to methods that have become prominent in the last few decades as increasingly large data sets have made new techniques and applications possible these include regularization methods smoothing methods tree based methods in the new edition of the handbook the data analyst s toolkit is explored and expanded examples are drawn from a wide variety of real life applications and data sets all the utilized r code and data are available via an author maintained website of interest to undergraduate and graduate students taking courses in statistics and regression the handbook of regression analysis will also be invaluable to practicing data scientists and statisticians

Analyzing Baseball Data with R, Second Edition

2018-11-22

the book will be of interest to basefall fans who want to learn some sabermetrics and also people who know

sabermetrics but would like to use r in their data exploration many students do not work on baseball data because the datasets are very large by learning r through our book they will be encouraged to do more baseball research on their own

Combinatorics of Permutations, Second Edition

2012-06-11

a unified account of permutations in modern combinatorics a 2006 choice outstanding academic title the first edition of this bestseller was lauded for its detailed yet engaging treatment of permutations providing more than enough material for a one semester course combinatorics of permutations second edition continues to clearly show the usefulness of this subject for both students and researchers and is recommended for undergraduate libraries by the maa expanded chapters much of the book has been significantly revised and extended this edition includes a new section on alternating permutations and new material on multivariate applications of the exponential formula it also discusses several important results in pattern avoidance as well as the concept of asymptotically normal distributions new chapter an entirely new chapter focuses on three sorting algorithms from molecular biology this emerging area of combinatorics is known for its easily stated and extremely difficult problems which sometimes can be solved using deep techniques from seemingly remote branches of mathematics additional exercises and problems all chapters in the second edition have more exercises and problems exercises are marked according to level of difficulty and many of the problems encompass results from the last eight years

Basic Probability: What Every Math Student Should Know (Second Edition)

2021-07-07

the second edition represents an ongoing effort to make probability accessible to students in a wide range of fields such as mathematics statistics and data science engineering computer science and business analytics the book is written for those learning about probability for the first time revised and updated the book is aimed specifically at statistics and data science students who need a solid introduction to the basics of probability while retaining its focus on basic probability including bayesian probability and the interface between probability and computer simulation this edition s significant revisions are as follows the approach followed in the book is to develop probabilistic intuition before diving into details the best way to learn probability is by practising on a lot of problems many instructive problems together with problem solving strategies are given answers to all problems and worked out solutions to selected problems are also provided henk tijms is the author of several textbooks in the area of applied probability in 2008 he had received the prestigious informs expository writing award for his work he is active in popularizing probability at dutch high schools

Interpretation of Bloodstain Evidence at Crime Scenes, Second Edition

1998-07-14

as witnessed in landmark criminal cases the quality and integrity of bloodstain evidence can be a crucial factor in determining a verdict since the first edition of interpretation of bloodstain evidence at crime scenes was published nearly a decade ago bloodstain pattern interpretation has continued to grow as a branch of forensic science revised and updated to reflect new technology and developments in the field the second edition is packed with new information and illustrations including 421 photographs and diagrams of improved quality that will aid in interpretation of evidence expanding on a single chapter presented in the bestselling first edition the second edition details in four chapters an introduction to bloodstain interpretation low velocity impact and angular considerations medium and high velocity impact and the significance of partially dried clotted aged and physically altered bloodstains in four new chapters a full chapter on the detection of blood with luminol

featuring high quality full color photographs of luminol reactions has been added this new edition also includes 12 new case studies in addition to 8 original case studies from the first edition that have been retained for their interpretative value everyone involved in crime scene evaluation and interpretation law enforcement officers criminologists medical examiners forensic pathologists medicolegal personnel and prosecutors and defense attorneys will benefit from the improved and expanded second edition of this definitive reference

Reproducible Research with R and R Studio, Second Edition

2015-06-11

all the tools for gathering and analyzing data and presenting results reproducible research with r and rstudio second edition brings together the skills and tools needed for doing and presenting computational research using straightforward examples the book takes you through an entire reproducible research workflow this practical workflow enables you to gather and analyze data as well as dynamically present results in print and on the web new to the second edition the rmarkdown package that allows you to create reproducible research documents in pdf html and microsoft word formats using the simple and intuitive markdown syntax improvements to rstudio s interface and capabilities such as its new tools for handling r markdown documents expanded knitr r code chunk capabilities the kable function in the knitr package and the texreg package for dynamically creating tables to present your data and statistical results an improved discussion of file organization enabling you to take full advantage of relative file paths so that your documents are more easily reproducible across computers and systems the dplyr magrittr and tidyr packages for fast data manipulation numerous modifications to r syntax in user created packages changes to github s and dropbox s interfaces create dynamic and highly reproducible research this updated book provides all the tools to combine your research with the presentation of your findings it saves you time searching for information so that you can spend more time actually addressing your research questions supplementary files used for the examples and a reproducible research project are available on the author s website

Bayesian Hierarchical Models

2019-09-16

an intermediate level treatment of bayesian hierarchical models and their applications this book demonstrates the advantages of a bayesian approach to data sets involving inferences for collections of related units or variables and in methods where parameters can be treated as random collections through illustrative data analysis and attention to statistical computing this book facilitates practical implementation of bayesian hierarchical methods the new edition is a revision of the book applied bayesian hierarchical methods it maintains a focus on applied modelling and data analysis but now using entirely r based bayesian computing options it has been updated with a new chapter on regression for causal effects and one on computing options and strategies this latter chapter is particularly important due to recent advances in bayesian computing and estimation including the development of rjags and rstan it also features updates throughout with new examples the examples exploit and illustrate the broader advantages of the r computing environment while allowing readers to explore alternative likelihood assumptions regression structures and assumptions on prior densities features provides a comprehensive and accessible overview of applied bayesian hierarchical modelling includes many real data examples to illustrate different modelling topics r code based on rjags jagsui r2openbugs and rstan is integrated into the book emphasizing implementation software options and coding principles are introduced in new chapter on computing programs and data sets available on the book s website

Data Mining with R

2016-11-30

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

Ad Hoc and Sensor Networks

2011-02-28

this book provides a comprehensive yet easy coverage of ad hoc and sensor networks and fills the gap of existing literature in this growing field it emphasizes that there is a major interdependence among various layers of the network protocol stack contrary to wired or even one hop cellular networks the lack of a fixed infrastructure the inherent mobility the wireless channel and the underlying routing mechanism by ad hoc and sensor networks introduce a number of technological challenges that are difficult to address within the boundaries of a single protocol layer all existing textbooks on the subject often focus on a specific aspect of the technology and fail to provide critical insights on cross layer interdependencies to fully understand these intriguing networks one need to grasp specific solutions individually and also the many interdependencies and cross layer interactions

Excel and R Companion to the Second Edition of Quantifying the User Experience

2016-11-01

a step by step guide for calculating the most common statistical procedures in user research using excel or r with over 100 examples pulled from the 2nd edition of quantifying the user experience morgan kaufmann we provide the reader with the right methods for comparing means and proportions generating confidence intervals finding the right sample size as well as many statistical procedures not available in common statistical packages the procedures are relevant for small and large sample sizes

Advanced R Solutions

2021-08-24

this book offers solutions to all 284 exercises in advanced r second edition all the solutions have been carefully documented and made to be as clear and accessible as possible working through the exercises and their solutions will give you a deeper understanding of a variety of programming challenges many of which are relevant to everyday work this will expand your set of tools on a technical and conceptual level you will be able to transfer many of the specific programming schemes directly and will discover far more elegant solutions to everyday problems features when r creates copies and how it affects memory usage and code performance everything you could ever want to know about functions the differences between calling and exiting handlers how to employ functional programming to solve modular tasks the motivation mechanics usage and limitations of r s highly pragmatic s3 oo system the r6 oo system which is more like oo programming in other languages the rules that r uses to parse and evaluate expressions how to use metaprogramming to generate html or latex with elegant r code how to identify and resolve performance bottlenecks

Statistics in Engineering

2019-01-25

engineers are expected to design structures and machines that can operate in challenging and volatile environments while allowing for variation in materials and noise in measurements and signals statistics in engineering second edition with examples in matlab and r covers the fundamentals of probability and statistics and explains how to use these basic techniques to estimate and model random variation in the context of engineering analysis and design in all types of environments the first eight chapters cover probability and probability distributions graphical displays of data and descriptive statistics combinations of random variables and propagation of error statistical inference bivariate distributions and correlation linear regression on a single predictor variable and the measurement error model this leads to chapters including multiple regression comparisons of several means and split plot designs together with analysis of variance probability models and sampling strategies distinctive features include all examples based on work in industry consulting to industry and research for industry examples and case studies include all engineering disciplines emphasis on probabilistic modeling including decision trees markov chains and processes and structure functions intuitive explanations are followed by succinct mathematical justifications emphasis on random number generation that is used for stochastic simulations of engineering systems demonstration of key concepts and implementation of bootstrap methods for inference use of matlab and the open source software r both of which have an extensive range of statistical functions for standard analyses and also enable programing of specific applications use of multiple regression for times series models and analysis of factorial and central composite designs inclusion of topics such as weibull analysis of failure times and split plot designs that are commonly used in industry but are not usually included in introductory textbooks experiments designed to show fundamental concepts that have been tested with large classes working in small groups website with additional materials that is regularly updated andrew metcalfe david green andrew smith and jonathan tuke have taught probability and statistics to students of engineering at the university of adelaide for many years and have substantial industry experience their current research includes applications to water resources engineering mining and telecommunications

mahayaudin mansor worked in banking and insurance before teaching statistics and business mathematics at the universiti tun abdul razak malaysia and is currently a researcher specializing in data analytics and quantitative research in the health economics and social policy research group at the australian centre for precision health university of south australia tony greenfield formerly head of process computing and statistics at the british iron and steel research association is a statistical consultant he has been awarded the chambers medal for outstanding services to the royal statistical society the george box medal by the european network for business and industrial statistics for outstanding contributions to industrial statistics and the william g hunter award by the american society for quality

Flexible Imputation of Missing Data, Second Edition

2018-07-17

missing data pose challenges to real life data analysis simple ad hoc fixes like deletion or mean imputation only work under highly restrictive conditions which are often not met in practice multiple imputation replaces each missing value by multiple plausible values the variability between these replacements reflects our ignorance of the true but missing value each of the completed data set is then analyzed by standard methods and the results are pooled to obtain unbiased estimates with correct confidence intervals multiple imputation is a general approach that also inspires novel solutions to old problems by reformulating the task at hand as a missing data problem this is the second edition of a popular book on multiple imputation focused on explaining the application of methods through detailed worked examples using the mice package as developed by the author this new edition incorporates the recent developments in this fast moving field this class tested book avoids mathematical and technical details as much as possible formulas are accompanied by verbal statements that explain the formula in accessible terms the book sharpens the reader s intuition on how to think about missing data and provides all the tools needed to execute a well grounded quantitative analysis in the presence of missing data

Programming in C, 2nd Edition

2022-06-01

c is the most versatile of programming languages it has caused a number of innovations in the areas of software and information technology and is the forerunner to a new programming paradigm the oot the major derivative of which is the graphical user interface which has tremendously simplified the use of computers c has led to many path breaking developments in the field of computer science such as vibrant social media e commerce e banking mobile banking cloud computing internet of things and big data analytics learning of c thus is of tremendous use to every programmer the learner only needs to follow a step by step process with one step at a time so as to absorb its tenets easily exactly the approach this book has followed over the years this book has helped thousands of aspirants in developing their career in the language the second edition has made it compatible with the latest revisions to c standards it also covers the significant differences between c90 c99 and c11 including all the language features and library functions added in c99 and c11 new in the second edition virtually rewritten text to suit contemporary needs all revisions to c standards carried out in 1999 and 2011 a new chapter on multithreading a separate chapter on strings carved out for proper focus

Choose your WoW - Second Edition (JAPANESE)

2017-02-17

hundreds of organizations around the world have already benefited from disciplined agile delivery dad disciplined agile da is the only comprehensive tool kit available for guidance on building high performance agile teams and optimizing your way of working wow as a hybrid of the leading agile lean and traditional approaches da provides hundreds of strategies to help you make better decisions within your agile teams balancing self organization with the realities and constraints of your unique enterprise context this book provides a foundation for enterprise agility value streams and a disciplined approach to devops is a pragmatic application of agile lean

and traditional techniques for your enterprise class environment overviews a strategy for teams to evolve a fit for purpose flexible wow that still supports a consistent governance strategy for leadership and makes a perfect study guide for disciplined agile certification why fail fast as the agile industry likes to recommend when you can learn quickly on your journey to high performance with this book you can make better decisions based upon proven context based strategies leading to earlier success and better outcomes

Applied Time Series Analysis with R

2022-02-14

virtually any random process developing chronologically can be viewed as a time series in economics closing prices of stocks the cost of money the jobless rate and retail sales are just a few examples of many developed from course notes and extensively classroom tested applied time series analysis with r second edition includes examples across a variety of fields develops theory and provides an r based software package to aid in addressing time series problems in a broad spectrum of fields the material is organized in an optimal format for graduate students in statistics as well as in the natural and social sciences to learn to use and understand the tools of applied time series analysis features gives readers the ability to actually solve significant real world problems addresses many types of nonstationary time series and cutting edge methodologies promotes understanding of the data and associated models rather than viewing it as the output of a black box provides the r package tswge available on cran which contains functions and over 100 real and simulated data sets to accompany the book extensive help regarding the use of tswge functions is provided in appendices and on an associated website over 150 exercises and extensive support for instructors the second edition includes additional real data examples uses r based code that helps students easily analyze data generate realizations from models and explore the associated characteristics it also adds discussion of new advances in the analysis of long memory data and data with time varying frequencies tvf

Stochastic Processes with R

2014-10-09

stochastic processes with r an introduction cuts through the heavy theory that is present in most courses on random processes and serves as practical guide to simulated trajectories and real life applications for stochastic processes the light yet detailed text provides a solid foundation that is an ideal companion for undergraduate statistics students looking to familiarize themselves with stochastic processes before going on to more advanced courses key features provides complete r codes for all simulations and calculations substantial scientific or popular applications of each process with occasional statistical analysis helpful definitions and examples are provided for each process end of chapter exercises cover theoretical applications and practice calculations

Analyzing Sensory Data with R

2012-02

choose the proper statistical method for your sensory data issue analyzing sensory data with r gives you the foundation to analyze and interpret sensory data the book helps you find the most appropriate statistical method to tackle your sensory data issue covering quantitative qualitative and affective approaches the book presents the big picture of sensory evaluation through an integrated approach that connects the different dimensions of sensory evaluation you ll understand the reasons why sensory data are collected the ways in which the data are collected and analyzed the intrinsic meaning of the data the interpretation of the data analysis results each chapter corresponds to one main sensory topic the chapters start with presenting the nature of the sensory evaluation and its objectives the sensory particularities related to the sensory evaluation details about the data set obtained and the statistical analyses required using real examples the authors then illustrate step by step how the analyses are performed in r the chapters conclude with variants and extensions

of the methods that are related to the sensory task itself the statistical methodology or both

Environmental Statistics with R and S-Plus Second Edition

condensed and reorganized this comprehensive second edition covers most of the statistical methods used in the field and now features the use of both r and s plus software continuing to emphasize lognormal distributions censored data and computing this edition includes additional material on equivalence testing it also illustrates environmental sampling designs using the public domain package vsp in addition the authors provide a detailed discussion of spatial mapping procedures and spatial mapping analysis in r along with updated problem sets and new examples this edition contains numerous new references that bring the research up to date

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