

Empire of the summer moon quanah parker and the r (2023)

R for Data Science The Book of R R in Action Advanced R The Big R-Book Learning Statistics with R Introduction to Data Science Deep Learning with R Statistical Inference via Data Science: A ModernDive into R and the Tidyverse Graphics for Statistics and Data Analysis with R R in Action, Third Edition Introductory Statistics with R Geocomputation with R The R Book Advanced R Spatial Modeling in GIS and R for Earth and Environmental Sciences Modern Statistics with R Applied Econometrics with R Mastering Spark with R R Packages Statistics and Data with R Statistical Inference via Data Science: A ModernDive into R and the Tidyverse Advanced R, Second Edition Machine Learning with R, the tidyverse, and mlr Modeling Binary Correlated Responses using SAS, SPSS and R Reproducible Research with R and RStudio Data Analysis and Graphics Using R Bayesian Analysis with Excel and R R for Everyone Ecological Models and Data in R R Quick Syntax Reference Moving from IBM® SPSS® to R and RStudio® Advanced R Solutions R Markdown Spatial Data Analysis in Ecology and Agriculture Using R Mathematical Statistics with Resampling and R Learning R Programming Data Mining with Rattle and R Rolling the R's An Introduction to R for Spatial Analysis and Mapping

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R for Data Science 2016-12-12 learn how to use r to turn raw data into insight knowledge and understanding this book introduces you to r studio and the tidyverse a collection of r packages designed to work together to make data science fast fluent and fun suitable for readers with no previous programming experience r for data science is designed to get you doing data science as quickly as possible authors hadley wickham and garrett grolemund guide you through the steps of importing wrangling exploring and modeling your data and communicating the results you ll get a complete big picture understanding of the data science cycle along with basic tools you need to manage the details each section of the book is paired with exercises to help you practice what you ve learned along the way you ll learn how to wrangle transform your datasets into a form convenient for analysis program learn powerful r tools for solving data problems with greater clarity and ease explore examine your data generate hypotheses and quickly test them model provide a low dimensional summary that captures true signals in your dataset communicate learn r markdown for integrating prose code and results

The Book of R 2016-07-16 the book of r is a comprehensive beginner friendly guide to r the world s most popular programming language for statistical analysis even if you have no programming experience and little more than a grounding in the basics of mathematics you ll find everything you need to begin using r effectively for statistical analysis you ll start with the basics like how to handle data and write simple programs before moving on to more advanced topics like producing statistical summaries of your data and performing statistical tests and modeling you ll even learn how to create impressive data visualizations with r s basic graphics tools and contributed packages like ggplot2 and ggvis as well as interactive 3d visualizations using the rgl package dozens of hands on exercises with downloadable solutions take you from theory to practice

you learn the fundamentals of programming in r including how to write data frames create functions and use variables statements and loops statistical concepts like exploratory data analysis probabilities hypothesis tests and regression modeling and how to execute them in r how to access r s thousands of functions libraries and data sets how to draw valid and useful conclusions from your data how to create publication quality graphics of your results combining detailed explanations with real world examples and exercises this book will provide you with a solid understanding of both statistics and the depth of r s functionality make the book of r your doorway into the growing world of data analysis

R in Action 2015-05-20 summary r in action second edition presents both the r language and the examples that make it so useful for business developers focusing on practical solutions the book offers a crash course in statistics and covers elegant methods for dealing with messy and incomplete data that are difficult to analyze using traditional methods you ll also master r s extensive graphical capabilities for exploring and presenting data visually and this expanded second edition includes new chapters on time series analysis cluster analysis and classification methodologies including decision trees random forests and support vector machines purchase of the print book includes a free ebook in pdf kindle and epub formats from manning publications about the technology business pros and researchers thrive on data and r speaks the language of data analysis r is a powerful programming language for statistical computing unlike general purpose tools r provides thousands of modules for solving just about any data crunching or presentation challenge you re likely to face r runs on all important platforms and is used by thousands of major corporations and institutions worldwide about the book r in action second edition teaches you how to use the r language by presenting examples relevant to scientific and business developers focusing on practical solutions

offers a crash course in statistics including elegant methods for dealing with messy and incomplete data you ll also master r s extensive graphical capabilities for exploring and presenting data visually and this expanded second edition includes new chapters on forecasting data mining and dynamic report writing what s inside complete r language tutorial using r to manage analyze and visualize data techniques for debugging programs and creating packages oop in r over 160 graphs about the author dr rob kabacoff is a seasoned researcher and teacher who specializes in data analysis he also maintains the popular quick r website at statmethods net table of contents part 1 getting started introduction to r creating a dataset getting started with graphs basic data management advanced data management part 2 basic methods basic graphs basic statistics part 3 intermediate methods regression analysis of variance power analysis intermediate graphs resampling statistics and bootstrapping part 4 advanced methods generalized linear models principal components and factor analysis time series cluster analysis classification advanced methods for missing data part 5 expanding your skills advanced graphics with ggplot2 advanced programming creating a package creating dynamic reports advanced graphics with the lattice package available online only from manning com kabacoff2

Advanced R 2015-09-15 an essential reference for intermediate and advanced r programmers advanced r presents useful tools and techniques for attacking many types of r programming problems helping you avoid mistakes and dead ends with more than ten years of experience programming in r the author illustrates the elegance beauty and flexibility at the heart of r the book develops the necessary skills to produce quality code that can be used in a variety of circumstances you will learn the fundamentals of r including standard data types and functions functional programming as a useful framework for solving wide the classes of problems the positives and negatives of empire of the summer moon

metaprogramming how to write fast memory efficient code this book not only helps current r users become r programmers but also shows existing programmers what s special about r intermediate r programmers can dive deeper into r and learn new strategies for solving diverse problems while programmers from other languages can learn the details of r and understand why r works the way it does

The Big R-Book 2020-09-29 introduces professionals and scientists to statistics and machine learning using the programming language r written by and for practitioners this book provides an overall introduction to r focusing on tools and methods commonly used in data science and placing emphasis on practice and business use it covers a wide range of topics in a single volume including big data databases statistical machine learning data wrangling data visualization and the reporting of results the topics covered are all important for someone with a science math background that is looking to quickly learn several practical technologies to enter or transition to the growing field of data science the big r book for professionals from data science to learning machines and reporting with r includes nine parts starting with an introduction to the subject and followed by an overview of r and elements of statistics the third part revolves around data while the fourth focuses on data wrangling part 5 teaches readers about exploring data in part 6 we learn to build models part 7 introduces the reader to the reality in companies part 8 covers reports and interactive applications and finally part 9 introduces the reader to big data and performance computing it also includes some helpful appendices provides a practical guide for non experts with a focus on business users contains a unique combination of topics including an introduction to r machine learning mathematical models data wrangling and reporting uses a practical tone and integrates multiple topics in a coherent framework demystifies the hype around machine learning and the by enabling readers to understand the provided models

program them in r shows readers how to visualize results in static and interactive reports supplementary materials includes pdf slides based on the book s content as well as all the extracted r code and is available to everyone on a wiley book companion site the big r book is an excellent guide for science technology engineering or mathematics students who wish to make a successful transition from the academic world to the professional it will also appeal to all young data scientists quantitative analysts and analytics professionals as well as those who make mathematical models

Learning Statistics with R 2013-01-13 learning statistics with r covers the contents of an introductory statistics class as typically taught to undergraduate psychology students focusing on the use of the r statistical software and adopting a light conversational style throughout the book discusses how to get started in r and gives an introduction to data manipulation and writing scripts from a statistical perspective the book discusses descriptive statistics and graphing first followed by chapters on probability theory sampling and estimation and null hypothesis testing after introducing the theory the book covers the analysis of contingency tables t tests anovas and regression bayesian statistics are covered at the end of the book for more information and the opportunity to check the book out before you buy visit au.ccs.teaching.lsr.org or learningstatisticswithr.com

Introduction to Data Science 2019-11-20 introduction to data science data analysis and prediction algorithms with r introduces concepts and skills that can help you tackle real world data analysis challenges it covers concepts from probability statistical inference linear regression and machine learning it also helps you develop skills such as r programming data wrangling data visualization predictive algorithm building file organization with unix linux shell version control with git and github and reproducible document preparation this book is a textbook for the first course in data science no previous knowledge of r is assumed

necessary although some experience with programming may be helpful the book is divided into six parts r data visualization statistics with r data wrangling machine learning and productivity tools each part has several chapters meant to be presented as one lecture the author uses motivating case studies that realistically mimic a data scientist s experience he starts by asking specific questions and answers these through data analysis so concepts are learned as a means to answering the questions examples of the case studies included are us murder rates by state self reported student heights trends in world health and economics the impact of vaccines on infectious disease rates the financial crisis of 2007 2008 election forecasting building a baseball team image processing of hand written digits and movie recommendation systems the statistical concepts used to answer the case study questions are only briefly introduced so complementing with a probability and statistics textbook is highly recommended for in depth understanding of these concepts if you read and understand the chapters and complete the exercises you will be prepared to learn the more advanced concepts and skills needed to become an expert

Deep Learning with R 2018-01-22 summary deep learning with r introduces the world of deep learning using the powerful keras library and its r language interface the book builds your understanding of deep learning through intuitive explanations and practical examples continue your journey into the world of deep learning with deep learning with r in motion a practical hands on video course available exclusively at manning com manning com livevideo deep learning with r in motion purchase of the print book includes a free ebook in pdf kindle and epub formats from manning publications about the technology machine learning has made remarkable progress in recent years deep learning systems now enable previously impossible smart applications revolutionizing image recognition and natural language processing and identifying complex patterns in data the

keras deep learning library provides data scientists and developers working in r a state of the art toolset for tackling deep learning tasks about the book deep learning with r introduces the world of deep learning using the powerful keras library and its r language interface initially written for python as deep learning with python by keras creator and google ai researcher françois chollet and adapted for r by rstudio founder j j allaire this book builds your understanding of deep learning through intuitive explanations and practical examples you ll practice your new skills with r based applications in computer vision natural language processing and generative models what s inside deep learning from first principles setting up your own deep learning environment image classification and generation deep learning for text and sequences about the reader you ll need intermediate r programming skills no previous experience with machine learning or deep learning is assumed about the authors françois chollet is a deep learning researcher at google and the author of the keras library j j allaire is the founder of rstudio and the author of the r interfaces to tensorflow and keras table of contents part 1 fundamentals of deep learning what is deep learning before we begin the mathematical building blocks of neural networks getting started with neural networks fundamentals of machine learning part 2 deep learning in practice deep learning for computer vision deep learning for text and sequences advanced deep learning best practices generative deep learning conclusions

Statistical Inference via Data Science: A Modern Dive into R and the Tidyverse 2019-12-23 statistical inference via data

science a moderndive into r and the tidyverse provides a pathway for learning about statistical inference using data science tools widely used in industry academia and government it introduces the tidyverse suite of r packages including the ggplot2 package for data visualization and the dplyr package for data wrangling after equipping readers with just enough of these data science tools to perform effective exploratory data analyses the book

covers traditional introductory statistics topics like confidence intervals hypothesis testing and multiple regression modeling while focusing on visualization throughout features assumes minimal prerequisites notably no prior calculus nor coding experience motivates theory using real world data including all domestic flights leaving new york city in 2013 the gapminder project and the data journalism website fivethirtyeight com centers on simulation based approaches to statistical inference rather than mathematical formulas uses the infer package for tidy and transparent statistical inference to construct confidence intervals and conduct hypothesis tests via the bootstrap and permutation methods provides all code and output embedded directly in the text also available in the online version at moderndive com this book is intended for individuals who would like to simultaneously start developing their data science toolbox and start learning about the inferential and modeling tools used in much of modern day research the book can be used in methods and data science courses and first courses in statistics at both the undergraduate and graduate levels

Graphics for Statistics and Data Analysis with R 2018-09-26
praise for the first edition the main strength of this book is that it provides a unified framework of graphical tools for data analysis especially for univariate and low dimensional multivariate data in addition it is clearly written in plain language and the inclusion of r code is particularly useful to assist readers understanding of the graphical techniques discussed in the book it not only summarises graphical techniques but it also serves as a practical reference for researchers and graduate students with an interest in data display han lin shang journal of applied statistics graphics for statistics and data analysis with r second edition presents the basic principles of graphical design and applies these principles to engaging examples using the graphics and lattice packages in r it offers a wide array of modern graphical displays for the visualization and representation added in the second edition are

coverage of the ggplot2 graphics package material on human visualization and color rendering in r on screen and in print features emphasizes the fundamentals of statistical graphics and best practice guidelines for producing and choosing among graphical displays in r presents technical details on topics such as the estimation of quantiles nonparametric and parametric density estimation diagnostic plots for the simple linear regression model polynomial regression splines and locally weighted polynomial regression for producing a smooth curve trellis graphics for multivariate data provides downloadable r code and data for figures at graphicsforstatistics com kevin j keen is a professor of mathematics and statistics at the university of northern british columbia prince george canada and an accredited professional statistician tm by the statistical society of canada and the american statistical association

R in Action, Third Edition 2022-05-03 r in action presents both the r system and the use cases that make it such a compelling package for business developers the book begins by introducing the r language and then moves on to various examples illustrating r s features

Introductory Statistics with R 2008-06-27 this book provides an elementary level introduction to r targeting both non statistician scientists in various fields and students of statistics the main mode of presentation is via code examples with liberal commenting of the code and the output from the computational as well as the statistical viewpoint brief sections introduce the statistical methods before they are used a supplementary r package can be downloaded and contains the data sets all examples are directly runnable and all graphics in the text are generated from the examples the statistical methodology covered includes statistical standard distributions one and two sample tests with continuous data regression analysis one and two way analysis of variance regression analysis analysis of tabular data and sample size calculations in addition the last four chapters

contain introductions to multiple linear regression analysis linear models in general logistic regression and survival analysis *Geocomputation with R* 2019-03-22 geocomputation with r is for people who want to analyze visualize and model geographic data with open source software it is based on r a statistical programming language that has powerful data processing visualization and geospatial capabilities the book equips you with the knowledge and skills to tackle a wide range of issues manifested in geographic data including those with scientific societal and environmental implications this book will interest people from many backgrounds especially geographic information systems gis users interested in applying their domain specific knowledge in a powerful open source language for data science and r users interested in extending their skills to handle spatial data the book is divided into three parts i foundations aimed at getting you up to speed with geographic data in r ii extensions which covers advanced techniques and iii applications to real world problems the chapters cover progressively more advanced topics with early chapters providing strong foundations on which the later chapters build part i describes the nature of spatial datasets in r and methods for manipulating them it also covers geographic data import export and transforming coordinate reference systems part ii represents methods that build on these foundations it covers advanced map making including web mapping bridges to gis sharing reproducible code and how to do cross validation in the presence of spatial autocorrelation part iii applies the knowledge gained to tackle real world problems including representing and modeling transport systems finding optimal locations for stores or services and ecological modeling exercises at the end of each chapter give you the skills needed to tackle a range of geospatial problems solutions for each chapter and supplementary materials providing extended examples are available at [geocompr github io](https://geocompr.github.io/geocompr) geocompr.org articles empireofthesummermoon.com the levelace is a university academic fellow at the university of leeds quanah parker and the r

where he has taught r for geographic research over many years with a focus on transport systems dr jakub nowosad is an assistant professor in the department of geoinformation at the adam mickiewicz university in poznan where his focus is on the analysis of large datasets to understand environmental processes dr jannes muenchow is a postdoctoral researcher in the giscience department at the university of jena where he develops and teaches a range of geographic methods with a focus on ecological modeling statistical geocomputing and predictive mapping all three are active developers and work on a number of r packages including stplanr sabre and rggis

The R Book 2007-06-13 the high level language of r is recognized as one of the most powerful and flexible statistical software environments and is rapidly becoming the standard setting for quantitative analysis statistics and graphics r provides free access to unrivalled coverage and cutting edge applications enabling the user to apply numerous statistical methods ranging from simple regression to time series or multivariate analysis building on the success of the author's bestselling statistics an introduction using r the r book is packed with worked examples providing an all inclusive guide to r ideal for novice and more accomplished users alike the book assumes no background in statistics or computing and introduces the advantages of the r environment detailing its applications in a wide range of disciplines provides the first comprehensive reference manual for the r language including practical guidance and full coverage of the graphics facilities introduces all the statistical models covered by r beginning with simple classical tests such as chi square and t test proceeds to examine more advanced methods from regression and analysis of variance through to generalized linear models generalized mixed models time series spatial statistics multivariate statistics and much more the r book is aimed at undergraduates postgraduates and professionals in science engineering and medicine it is also ideal for students and professionals in statistics economics

geography and the social sciences

Advanced R 2014-09-25 an essential reference for intermediate and advanced r programmers advanced r presents useful tools and techniques for attacking many types of r programming problems helping you avoid mistakes and dead ends with more than ten years of experience programming in r the author illustrates the elegance beauty and flexibility at the heart of r the bo

Spatial Modeling in GIS and R for Earth and Environmental Sciences 2019-01-18 spatial modeling in gis and r for earth and environmental sciences offers an integrated approach to spatial modelling using both gis and r given the importance of geographical information systems and geostatistics across a variety of applications in earth and environmental science a clear link between gis and open source software is essential for the study of spatial objects or phenomena that occur in the real world and facilitate problem solving organized into clear sections on applications and using case studies the book helps researchers to more quickly understand gis data and formulate more complex conclusions the book is the first reference to provide methods and applications for combining the use of r and gis in modeling spatial processes it is an essential tool for students and researchers in earth and environmental science especially those looking to better utilize gis and spatial modeling offers a clear interdisciplinary guide to serve researchers in a variety of fields including hazards land surveying remote sensing cartography geophysics geology natural resources environment and geography provides an overview methods and case studies for each application expresses concepts and methods at an appropriate level for both students and new users to learn by example

Modern Statistics with R 2021-07-28 the past decades have transformed the world of statistical data analysis with new methods new types of data and new computational tools the of modern statistics with r is to introduce you to key parts of the

modern statistical toolkit it teaches you data wrangling importing formatting reshaping merging and filtering data in r exploratory data analysis using visualisation and multivariate techniques to explore datasets statistical inference modern methods for testing hypotheses and computing confidence intervals predictive modelling regression models and machine learning methods for prediction classification and forecasting simulation using simulation techniques for sample size computations and evaluations of statistical methods ethics in statistics ethical issues and good statistical practice r programming writing code that is fast readable and free from bugs starting from the very basics modern statistics with r helps you learn r by working with r topics covered range from plotting data and writing simple r code to using cross validation for evaluating complex predictive models and using simulation for sample size determination the book includes more than 200 exercises with fully worked solutions some familiarity with basic statistical concepts such as linear regression is assumed no previous programming experience is needed

Applied Econometrics with R 2008-12-10 r is a language and environment for data analysis and graphics it may be considered an implementation of s an award winning language initially developed at bell laboratories since the late 1970s the r project was initiated by robert gentleman and ross ihaka at the university of auckland new zealand in the early 1990s and has been developed by an international team since mid 1997 historically econometricians have favored other computing environments some of which have fallen by the wayside and also a variety of packages with canned routines we believe that r has great potential in econometrics both for research and for teaching there are at least three reasons for this 1 r is mostly platform independent and runs on microsoft windows the mac family of operating systems and various avors of unix linux and some of the some more exotic platforms 2 r is free software that's summer

downloaded and installed at no cost from a family of mirror sites around the globe the comprehensive r archive network cran hence students can easily install it on their own machines 3 r is open source software so that the full source code is available and can be inspected to understand what it really does learn from it and modify and extend it we also like to think that platform independence and the open source philosophy make r an ideal environment for reproducible econometric research

Mastering Spark with R 2019-10-07 if you re like most r users you have deep knowledge and love for statistics but as your organization continues to collect huge amounts of data adding tools such as apache spark makes a lot of sense with this practical book data scientists and professionals working with large scale data applications will learn how to use spark from r to tackle big data and big compute problems authors javier luraschi kevin kuo and edgar ruiz show you how to use r with spark to solve different data analysis problems this book covers relevant data science topics cluster computing and issues that should interest even the most advanced users analyze explore transform and visualize data in apache spark with r create statistical models to extract information and predict outcomes automate the process in production ready workflows perform analysis and modeling across many machines using distributed computing techniques use large scale data from multiple sources and different formats with ease from within spark learn about alternative modeling frameworks for graph processing geospatial analysis and genomics at scale dive into advanced topics including custom transformations real time data processing and creating custom spark extensions

R Packages 2015-03-26 turn your r code into packages that others can easily download and use this practical book shows you how to bundle reusable r functions sample data and documentation together by applying author hadley wickham s package development philosophy in the process you ll work with dev tools

roxygen and testthat a set of r packages that automate common development tasks devtools encapsulates best practices that hadley has learned from years of working with this programming language ideal for developers data scientists and programmers with various backgrounds this book starts you with the basics and shows you how to improve your package writing over time you'll learn to focus on what you want your package to do rather than think about package structure learn about the most useful components of an r package including vignettes and unit tests automate anything you can taking advantage of the years of development experience embodied in devtools get tips on good style such as organizing functions into files streamline your development process with devtools learn the best way to submit your package to the comprehensive r archive network cran learn from a well respected member of the r community who created 30 r packages including ggplot2 dplyr and tidyr

Statistics and Data with R 2008-11-20 r an open source software has become the de facto statistical computing environment it has an excellent collection of data manipulation and graphics capabilities it is extensible and comes with a large number of packages that allow statistical analysis at all levels from simple to advanced and in numerous fields including medicine genetics biology environmental sciences geology social sciences and much more the software is maintained and developed by academicians and professionals and as such is continuously evolving and up to date statistics and data with r presents an accessible guide to data manipulations statistical analysis and graphics using r assuming no previous knowledge of statistics or r the book includes a comprehensive introduction to the r language an integrated approach to importing and preparing data for analysis exploring and analyzing the data and presenting results over 300 examples including detailed explanations of the r scripts used throughout over 100 moderately large data sets from disciplines ranging from biology ecology and environmental sciences to

medicine law military and social sciences a parallel discussion of analyses with the normal density proportions binomial counts poisson and bootstrap methods two extensive indexes that include references to every r function and its arguments and packages used in the book and to every introduced concept

Statistical Inference via Data Science: A Modern Dive into R and the Tidyverse 2019-12-23

statistical inference via data science a moderndive into r and the tidyverse provides a pathway for learning about statistical inference using data science tools widely used in industry academia and government it introduces the tidyverse suite of r packages including the ggplot2 package for data visualization and the dplyr package for data wrangling after equipping readers with just enough of these data science tools to perform effective exploratory data analyses the book covers traditional introductory statistics topics like confidence intervals hypothesis testing and multiple regression modeling while focusing on visualization throughout features assumes minimal prerequisites notably no prior calculus nor coding experience motivates theory using real world data including all domestic flights leaving new york city in 2013 the gapminder project and the data journalism website fivethirtyeight com centers on simulation based approaches to statistical inference rather than mathematical formulas uses the infer package for tidy and transparent statistical inference to construct confidence intervals and conduct hypothesis tests via the bootstrap and permutation methods provides all code and output embedded directly in the text also available in the online version at moderndive com this book is intended for individuals who would like to simultaneously start developing their data science toolbox and start learning about the inferential and modeling tools used in much of modern day research the book can be used in methods and data science courses and first courses in statistics at both the undergraduate and graduate levels

Advanced R, Second Edition 2019-05-24 advancesummary

2023-02-12

17/30

empire of the
summer moon
quannah parker and
the r

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 of the elegant graphics for data analysis

Machine Learning with R, the tidyverse, and mlr 2020-03-20

summary machine learning ml is a collection of programming techniques for discovering relationships in data with ml algorithms you can cluster and classify data for tasks like making recommendations or fraud detection and make predictions for sales trends risk analysis and other forecasts once the domain of academic data scientists machine learning has become a mainstream business process and tools like the easy to learn r programming language put high quality data analysis in the hands of any programmer machine learning with r the tidyverse and mlr teaches you widely used ml techniques and how to apply them to your own datasets using the r programming language and its powerful ecosystem of tools this book will get you started purchase of the print book includes a free ebook in pdf kindle and epub formats from manning publications about the book machine learning with r the tidyverse and mlr gets you started in machine learning using r studio and the awesome mlr machine learning package this practical guide simplifies theory and avoids needlessly complicated statistics or math all core ml techniques are clearly explained through graphics and easy to grasp examples in each engaging chapter you ll put a new algorithm into action to solve a quirky predictive analysis problem including titanic survival odds spam email filtering and poisoned wine investigation what s inside using the tidyverse packages to process and plot your data techniques for supervised and unsupervised learning classification regression dimension reduction and clustering algorithms statistics primer to fill gaps in your knowledge about the reader for newcomers to machine learning with basic skills in r about the author hefin i rhys is a senior laboratory research scientist at the francis crick institute he runs his own youtube channel of screencast tutorials for r and rstudio table of contents part 1 introduction 1 introduction to machine learning 2 tidying manipulating and plotting data with the tidyverse part 2 classification 3 classifying based on

similarities with k nearest neighbors 4 classifying based on odds with logistic regression 5 classifying by maximizing separation with discriminant analysis 6 classifying with naive bayes and support vector machines 7 classifying with decision trees 8 improving decision trees with random forests and boosting part 3 regression 9 linear regression 10 nonlinear regression with generalized additive models 11 preventing overfitting with ridge regression lasso and elastic net 12 regression with knn random forest and xgboost part 4 dimension reduction 13 maximizing variance with principal component analysis 14 maximizing similarity with t sne and umap 15 self organizing maps and locally linear embedding part 5 clustering 16 clustering by finding centers with k means 17 hierarchical clustering 18 clustering based on density dbscan and optics 19 clustering based on distributions with mixture modeling 20 final notes and further reading

Modeling Binary Correlated Responses using SAS, SPSS and R

2015-10-12 statistical tools to analyze correlated binary data are spread out in the existing literature this book makes these tools accessible to practitioners in a single volume chapters cover recently developed statistical tools and statistical packages that are tailored to analyzing correlated binary data the authors showcase both traditional and new methods for application to health related research data and computer programs will be publicly available in order for readers to replicate model development but learning a new statistical language is not necessary with this book the inclusion of code for r sas and spss allows for easy implementation by readers for readers interested in learning more about the languages though there are short tutorials in the appendix accompanying data sets are available for download through the book s website data analysis presented in each chapter will provide step by step instructions so these new methods can be readily applied to projects researchers and graduate students in statistics epidemiology and public health will

find this book particularly useful

Reproducible Research with R and RStudio 2020-02-21 praise for previous editions gandrud has written a great outline of how a fully reproducible research project should look from start to finish with brief explanations of each tool that he uses along the way advanced undergraduate students in mathematics statistics and similar fields as well as students just beginning their graduate studies would benefit the most from reading this book many more experienced r users or second year graduate students might find themselves thinking i wish i d read this book at the start of my studies when i was first learning r this book could be used as the main text for a class on reproducible research the american statistician reproducible research with r and r studio third 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 supplementary materials and example are available on the author s website new to the third edition updated package recommendations examples urls and removed technologies no longer in regular use more advanced r markdown and less latex in discussions of markup languages and examples stronger focus on reproducible working directory tools updated discussion of cloud storage services and persistent reproducible material citation added discussion of jupyter notebooks and reproducible practices in industry examples of data manipulation with tidyverse tibbles in addition to standard data frames and pivot longer and pivot wider functions for pivoting data features incorporates the most important advances that have been developed since the editions were published describes a complete reproducible research workflow from data gathering to the presentation of results shows how to automatically generate tables and figures using r includes instructions on formatting

presentation document via markup languages discusses cloud storage and versioning services particularly github explains how to use unix like shell programs for working with large research projects

Data Analysis and Graphics Using R 2006-12-26 join the revolution ignited by the ground breaking r system starting with an introduction to r covering standard regression methods then presenting more advanced topics this book guides users through the practical and powerful tools that the r system provides the emphasis is on hands on analysis graphical display and interpretation of data the many worked examples taken from real world research are accompanied by commentary on what is done and why a website provides computer code and data sets allowing readers to reproduce all analyses updates and solutions to selected exercises are also available assuming only basic statistical knowledge the book is ideal for research scientists final year undergraduate or graduate level students of applied statistics and practising statisticians it is both for learning and for reference this revised edition reflects changes in r since 2003 and has new material on survival analysis random coefficient models and the handling of high dimensional data

Bayesian Analysis with Excel and R 2022-12-15 leverage the full power of bayesian analysis for competitive advantage bayesian methods can solve problems you can t reliably handle any other way building on your existing excel analytics skills and experience microsoft excel mvp conrad carlberg helps you make the most of excel s bayesian capabilities and move toward r to do even more step by step with real world examples carlberg shows you how to use bayesian analytics to solve a wide array of real problems carlberg clarifies terminology that often bewilders analysts and offers sample r code to take advantage of the rethinking package in r and its gateway to stan as you incorporate these bayesian approaches into your analytical toolbox you ll build a powerful competitive advantage from your

organization and yourself explore key ideas and strategies that underlie bayesian analysis distinguish prior likelihood and posterior distributions and compare algorithms for driving sampling inputs use grid approximation to solve simple univariate problems and understand its limits as parameters increase perform complex simulations and regressions with quadratic approximation and richard mcelreath s quap function manage text values as if they were numeric learn today s gold standard bayesian sampling technique markov chain monte carlo mcmc use mcmc to optimize execution speed in high complexity problems discover when frequentist methods fail and bayesian methods are essential and when to use both in tandem

R for Everyone 2014 a guide to using and understanding the r computer programming language

Ecological Models and Data in R 2008-07-21 introduction and background exploratory data analysis and graphics deterministic functions for ecological modeling probability and stochastic distributions for ecological modeling stochastic simulation and power analysis likelihood and all that optimization and all that likelihood examples standar statistics revisited modeling variance dynamic models

R Quick Syntax Reference 2014-04-30 the r quick syntax reference is a handy reference book detailing the intricacies of the r language not only is r a free open source tool r is powerful flexible and has state of the art statistical techniques available with the many details which must be correct when using any language however the r quick syntax reference makes using r easier starting with the basic structure of r the book takes you on a journey through the terminology used in r and the syntax required to make r work you will find looking up the correct form for an expression quick and easy with a copy of the r quick syntax reference in hand you will find that are able to use the multitude of functions available to the r user and are even able to write their own functions to explore and analyze data takes you through

learning r from download to statistical analysis clears the confusion around object types and how to use and convert the types tells you how to search for statistical techniques using the r help pages

Moving from IBM® SPSS® to R and RStudio® 2021-02-12 are you a researcher or instructor who has been wanting to learn r and rstudio but you don t know where to begin do you want to be able to perform all the same functions you use in ibm spss in r is your license to ibm spss expiring or are you looking to provide your students guidance to a freely available statistical software program moving from ibm spss to r and rstudio a statistics companion is a concise and easy to read guide for users who want to know learn how to perform statistical calculations in r brief chapters start with a step by step introduction to r and rstudio offering basic installation information and a summary of the differences subsequent chapters walk through differences between spss and r in terms of data files concepts and structure detailed examples provide walk throughs for different types of data conversions and transformations and their equivalent in r helpful and comprehensive appendices provide tables of each statistical transformation in r with its equivalent in spss and show what if any differences in assumptions factor to into each function statistical tests from t tests to anova through three factor anova and multiple regression and chi square are covered in detail showing each step in the process for both programs by focusing just on r and eschewing detailed conversations about statistics this brief guide gives adept spss users just the information they need to transition their data analyses from spss to r

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 the 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

R Markdown 2018-07-27 r markdown the definitive guide is the first official book authored by the core r markdown developers that provides a comprehensive and accurate reference to the r markdown ecosystem with r markdown you can easily create reproducible data analysis reports presentations dashboards interactive applications books dissertations websites and journal articles while enjoying the simplicity of markdown and the great power of r and other languages in this book you will learn basics syntax of markdown and r code chunks how to generate figures and tables and how to use other computing languages built in output formats of r markdown pdf html word rtf markdown documents and ioslides slidy beamer powerpoint presentations extensions and applications dashboards tuftte handouts xaringan reveal js presentations websites books journal articles and interactive tutorials advanced topics parameterized reports html widgets document templates custom output formats and shiny documents yihui xie is a software engineer at rstudio he has authored and co authored several r packages including knitr rmarkdown bookdown blogdown shiny xaringan and empire of the

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markdown and blogdown creating websites with r markdown j j
allaire is the founder of rstudio and the creator of the rstudio ide
he is an author of several packages in the r markdown ecosystem
including rmarkdown flexdashboard learnr and radix garrett
grolemund is the co author of r for data science and author of
hands on programming with r he wrote the lubridate r package
and works for rstudio as an advocate who trains engineers to do
data science with r and the tidyverse

Spatial Data Analysis in Ecology and Agriculture Using R

2018-12-07 key features unique in its combination of serving as
an introduction to spatial statistics and to modeling agricultural
and ecological data using r provides exercises in each chapter to
facilitate the book s use as a course textbook or for self study
adds new material on generalized additive models point pattern
analysis and new methods of bayesian analysis of spatial data
includes a completely revised chapter on the analysis of
spatiotemporal data featuring recently introduced software and
methods updates its coverage of r software including newly
introduced packages spatial data analysis in ecology and
agriculture using r 2nd edition provides practical instruction on
the use of the r programming language to analyze spatial data
arising from research in ecology agriculture and environmental
science readers have praised the book s practical coverage of
spatial statistics real world examples and user friendly approach
in presenting and explaining r code aspects maintained in this
update using data sets from cultivated and uncultivated
ecosystems the book guides the reader through the analysis of
each data set including setting research objectives designing the
sampling plan data quality control exploratory and confirmatory
data analysis and drawing scientific conclusions additional
material to accompany the book on both analyzing satellite data
and on multivariate analysis can be accessed at plantsciences.ucdavis.edu/plant_additionaltopics.htm

Mathematical Statistics with Resampling and R 2018-09-17

this thoroughly updated second edition combines the latest software applications with the benefits of modern resampling techniques resampling helps students understand the meaning of sampling distributions sampling variability p values hypothesis tests and confidence intervals the second edition of mathematical statistics with resampling and r combines modern resampling techniques and mathematical statistics this book has been classroom tested to ensure an accessible presentation uses the powerful and flexible computer language r for data analysis and explores the benefits of modern resampling techniques this book offers an introduction to permutation tests and bootstrap methods that can serve to motivate classical inference methods the book strikes a balance between theory computing and applications and the new edition explores additional topics including consulting paired t test anova and google interview questions throughout the book new and updated case studies are included representing a diverse range of subjects such as flight delays birth weights of babies and telephone company repair times these illustrate the relevance of the real world applications of the material this new edition puts the focus on statistical consulting that emphasizes giving a client an understanding of data and goes beyond typical expectations presents new material on topics such as the paired t test fisher s exact test and the em algorithm offers a new section on google interview questions that illustrates statistical thinking provides a new chapter on anova contains more exercises and updated case studies data sets and r code written for undergraduate students in a mathematical statistics course as well as practitioners and researchers the second edition of mathematical statistics with resampling and r presents a revised and updated guide for applying the most current resampling techniques to mathematical statistics

Learning R Programming 2016-10-28 become an efficient data scientist with r about this book explore the r language from basic

types and data structures to advanced topics learn how to tackle programming problems and explore both functional and object oriented programming techniques learn how to address the core problems of programming in r and leverage the most popular packages for common tasks who this book is for this is the perfect tutorial for anyone who is new to statistical programming and modeling anyone with basic programming and data processing skills can pick this book up to systematically learn the r programming language and crucial techniques what you will learn explore the basic functions in r and familiarize yourself with common data structures work with data in r using basic functions of statistics data mining data visualization root solving and optimization get acquainted with r s evaluation model with environments and meta programming techniques with symbol call formula and expression get to grips with object oriented programming in r including the s3 s4 rc and r6 systems access relational databases such as sqlite and non relational databases such as mongodb and redis get to know high performance computing techniques such as parallel computing and rcpp use web scraping techniques to extract information create rmarkdown an interactive app with shiny diagramr interactive charts ggvis and more in detail r is a high level functional language and one of the must know tools for data science and statistics powerful but complex r can be challenging for beginners and those unfamiliar with its unique behaviors learning r programming is the solution an easy and practical way to learn r and develop a broad and consistent understanding of the language through hands on examples you ll discover powerful r tools and r best practices that will give you a deeper understanding of working with data you ll get to grips with r s data structures and data processing techniques as well as the most popular r packages to boost your productivity from the offset start with the basics of r then dive deep into the programming techniques and paradigms to make you

excel advance quickly to a deeper understanding of r s behavior as you learn common tasks including data analysis databases web scraping high performance computing and writing documents by the end of the book you ll be a confident r programmer adept at solving problems with the right techniques style and approach developed to make learning easy and intuitive this book comes packed with a wide variety of statistical and graphical techniques and a wealth of practical information for anyone looking to get started with this exciting and powerful language

Data Mining with Rattle and R 2011-08-04 data mining is the art and science of intelligent data analysis by building knowledge from information data mining adds considerable value to the ever increasing stores of electronic data that abound today in performing data mining many decisions need to be made regarding the choice of methodology the choice of data the choice of tools and the choice of algorithms throughout this book the reader is introduced to the basic concepts and some of the more popular algorithms of data mining with a focus on the hands on end to end process for data mining williams guides the reader through various capabilities of the easy to use free and open source rattle data mining software built on the sophisticated r statistical software the focus on doing data mining rather than just reading about data mining is refreshing the book covers data understanding data preparation data refinement model building model evaluation and practical deployment the reader will learn to rapidly deliver a data mining project using software easily installed for free from the internet coupling rattle with r delivers a very sophisticated data mining environment with all the power and more of the many commercial offerings

Rolling the R's 1997 thirty seven stories and poems on hawaii s kalihi valley the subjects range from the clash of cultures between whites and natives to the plight of a 10 year old girl who becomes pregnant

An Introduction to R for Spatial Analysis and Mapping 2014-04-30

in an age of big data data journalism and with a wealth of quantitative information around us it is not enough for students to be taught only 100 year old statistical methods using out of the box software they need to have 21st century analytical skills too this is an excellent and student friendly text from two of the world leaders in the teaching and development of spatial analysis it shows clearly why the open source software r is not just an alternative to commercial gis it may actually be the better choice for mapping analysis and for replicable research providing practical tips as well as fully working code this is a practical how to guide ideal for undergraduates as well as those using r for the first time it will be required reading on my own courses richard harris professor of quantitative social science university of bristol r is a powerful open source computing tool that supports geographical analysis and mapping for the many geography and non geography students and researchers interested in spatial analysis and mapping this book provides an introduction to the use of r for spatial statistical analysis geocomputation and the analysis of geographical information for researchers collecting and using data with location attached largely through increased gps functionality brunsdon and comber take readers from zero to hero in spatial analysis and mapping through functions they have developed and compiled into r packages this enables practical r applications in gis spatial analyses spatial statistics mapping and web scraping each chapter includes example data and commands for exploring it scripts and coding to exemplify specific functionality advice for developing greater understanding through functions such as locator view and alternative coding to achieve the same ends self contained exercises for students to work through embedded code within the descriptive text this is a definitive how to that takes students of any discipline from coding to actual applications and uses of r