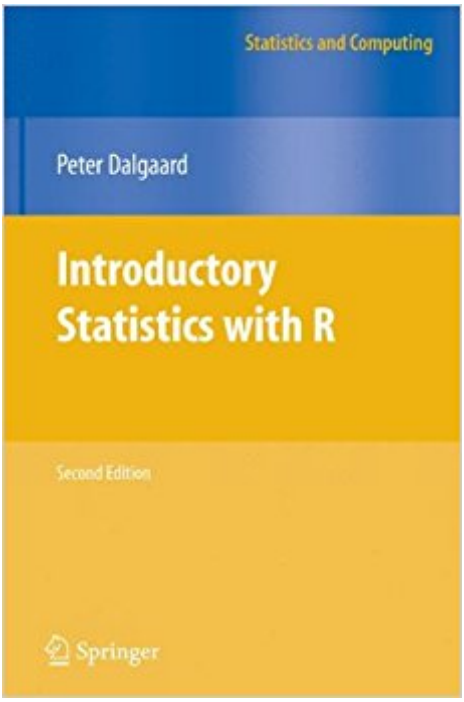
Introductory Statistics With R (Statistics And Computing)



Synopsis

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.

Book Information

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Customer Reviews

From the reviews:TECHNOMETRICS"Ã¢â ¬Â¦extensive, well organized, and well documentedÃ¢â ¬Â¦The book is an elegant R companion, suitable for the statistically initiated who want to program their own analyses. For experienced statisticians and data analysts, the book provides a good overview of the basic statistical analysis capabilities of R and presumably prepares readers for later migration to SÃ¢â ¬Â¦The format of this compact book is attractiveÃ¢â ¬Â¦The

book makes excellent use of fonts and intersperses graphics near the codes that produced them. Output from each procedure is dissected line by line to link R code with the computed resultÃ¢â ¬Â¦I can recommend [this book] to its target audience. The author provides an excellent overview of R. I found the wealth of clear examples educational and a practical way to preview both R and S.""The scope of the book, introductory statistics, is a very useful set of methods in parametric and non-parametric statistics up to logistic regression and survival analysis. Ã¢â ¬Â¦ Where many constructs in R are very attractive for mathematical oriented users, e.g. matrices, Dalgaard succeeded in convincing me that with little extra effort they can be made very useful to less mathematically oriented people, e.g. by specifying row and column names, and proposing quiteÃ Â attractive ways to specify for example Ã¢â ¬Ëœsubsetsâ ¬â„¢ of rows and columns." (Dr. H. W. M. Hendriks, Kwantitatieve Methoden, Vol. 72B8, 2003)"R is an Open Source implementation of the well-known S language. It works on multiple computing platforms and can be freely downloaded. R is thus ideally suited for teaching at many levels as well as for practical data analysis and methodological development. This book provides an elementary-level introduction to R, targeting both non-statistician scientists in various fields and students of statistics. Ã¢â ¬Â¦ Brief sections introduce the statistical methods before they are used. A supplementary R package can be downloaded and contains the data sets." (Zentralblatt fÃƒÂ r Didaktik der Mathematik, August, 2004)"This is a nice book on statistical methods and statistical computing in R, a language and environment for statistical computing and graphs: this dialect of the S language is available as free software through internet. Ã¢â ¬Â¦ Explanation of statistical methods, together with an interpretation of statistical concepts, is the prevailing style of the text. They are illustrated by plenty of practical examples, all computed using R. This book will be useful for novices in applied statistics or in computing in R." (European Mathematical Society Newsletter, September, 2003)"The book is an elegant R companion, suitable for the statistically initiated who want to program their own analyses. For experienced statisticians and data analysts, the book provides a good overview of the basic statistical analysis capabilities of R Ã¢â ¬Â¦ prepares readers for later migration to S. Ã¢â ¬Â¦ I can recommend Introductory Statistics With R to its target audience. The author provides an excellent overview of R. I found the wealth of clear examples educational and a practical way to preview both R and S." (Thomas D. Sandry, Technometrics, Vol. 45 (3), 2003)"R is both a statistical computer environment and a programming language designed to perform statistical analysis and to produce adequate corresponding graphics. Ã¢â ¬Â¦ The present book is Ã¢â ¬Â¦ a very useful guide for introducing a number of basic concepts and techniques necessary to practical statistics, covering both elementary statistics and actual programming in the R language. The book is organized in 12

chapters and three appendices, each chapter ending with a beneficial section of proposed exercises." (Silvia Curteanu, Zentralblatt MATH, Vol. 1006, 2003)From the reviews of the second edition:Ã¢â ¬Å“This review Ã¢â ¬Â¦ roughly cover the introductory topics of a first year statistics course. The Introductory Statistics with R (ISwR) book is targeted for a biometric/medical audience. It covers more topics Ã¢â ¬Â¦ like multiple regression and survival analysis and expects the reader to know about basic statistics. Ã¢â ¬Â¦ include examples and graphs together with the R code to construct them. Ã¢â ¬Â¦ The ISwR book is good for an academic and biometric audience.Ã¢â ¬Â• (Wolfgang Polasek, Statistical Papers, Vol. 52, 2011)Ã¢â ¬Å“This is a welcome addition to the new edition that will be appreciated by its users. Ã¢â ¬Â¦ The new edition is well written, and the new materials are well incorporated. Like the first edition, this edition will continue to be useful to the target audience, and I can safely recommend it to them.Ã¢â ¬Â• (Technometrics, Vol. 51 (2), May, 2009)

R is an Open Source implementation of the S language. It works on multiple computing platforms and can be freely downloaded. R is now in widespread use for teaching at many levels as well as for practical data analysis and methodological development. 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. A supplementary R package can be downloaded and contains the data sets. The statistical methodology 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 six chapters contain introductions to multiple linear regression analysis, linear models in general, logistic regression, survival analysis, Poisson regression, and nonlinear regression. In the second edition, the text and code have been updated to R version 2.6.2. The last two methodological chapters are new, as is a chapter on advanced data handling. The introductory chapter has been extended and reorganized as two chapters. Exercises have been revised and answers are now provided in an Appendix. Peter Dalgaard is associate professor at the Department of Biostatistics at the University of Copenhagen and has extensive experience in teaching within the PhD curriculum at the Faculty of Health Sciences. He has been a member of the R Core Team since 1997.

R is a useful freeware that can represent a hurdle to students and/or professionals who do not have

formal training in computer programming. This book helps to clear those hurdles, and introduces a solid foundation from which statistics users can build new tools for their specific analyses. The rest of this review is broken up for experienced and new users.****If you do not have a solid foundation in statistics, this book is not going to help you bridge that gap. Although the title is "Introductory Statistics with R" the author is clear that this is a book to learn how to program intro stats with R, and is not designed to teach any statistics tools. The author assumes you understand statistics and does not clarify statistics terms like p-value, test statistic, degrees of freedom, ANOVA, and the like. ****New to R:Although it may sound like a conundrum, the only way to learn a program is to program. Thankfully learning R can be easy, since the program is free, installs well on nearly all machines, and has detailed help files in various languages around the world. This is an excellent book for the R beginner, but I must stress the importance of ACTUALLY PROGRAMMING while you read this book. You CAN NOT read this book cover to cover and expect to learn R, programming doesn't work that way. This book can be a great resource for people who are brand new to R, but it requires hands on utilization of the source codes provided. Thankfully, this step is made that much easier for new users with a detailed explanation of how to obtain the ISWR package used with this text. Like everything in R, packages are free, and contain suites of functions and sometimes data. All the code in this book utilizes data from the ISWR package, so it will be easy to implement the code yourself and get the same results as the author.Familiar with R:Someone familiar with the notation in R can read this book cover to cover and find it enlightening. I had been programming in R for coursework in undergraduate statistics for four years before I found this text. It has a lot of useful data management code that people who taught themselves or learned for classes not dedicated to teaching the program will probably find useful. I found a lot of time-saving code that I wish I had known years ago!

I have prepared and delivered introductory courses and workshops on statistics and R for the past 3 years. As part of this work, I have reviewed more than a dozen different introductory R books. This is one of my favourite choices (if not my top one). Pete Dalgaard has been a member of the R Core Team since 1997, being a very active and knowledgeable expert on statistics with R. This quickly becomes apparent in the book, since you will find many tricks and smart procedures to accomplish many R tasks, most notably in the data preparation stage (where you spend 70-80% of all working time).A previous requirement is to acquire basic knowledge on the statistical tools and techniques presented throughout the book. This volume is focused on performing statistical analyses with R, not offering a complete introductory statistics course. However, each chapter starts with a very

useful recap of foundations and theory details for the statistical methods and tools presented in it. You can also find good references for further reading.Summarizing the main positive points:* Very clear explanations. The writing style is direct, informative, easy-to-follow.* Content organization is very clear. Every chapter has been conceived as an independent unit that you can read separately (except for the first introductory chapters to R syntax and routinary operations). Thus, you can either read it cover to cover or just jump directly into the chapter or section of your interest (as a reference).* There is an accompaning R package 'ISwR', that can be found in CRAN (as usual). It includes all datasets and utility functions presented in the text. This is a must to speed up practical sessions using this text as a reference, as well as for self-study.* Chapter 10 on "Advanced data handling" is simply *invaluable*. You will find yourself recurrently visiting its content in your daily work (well, until you master all these tips).Perhaps my only complain is that the books reflects the main field of interest of the author, as almost all examples have been taken from the Health Sciences. For example, I guess this is the reason why this 2nd edition includes a chapter on survival analysis (also useful for engineers, but under the different name "analysis of time-to-event data") but it does not include any chapter about times series models or analysis of longitudinal data in general. In any case, I am sincerely thankful to the author for this decision, since this was my first approach to this very interesting technique that I have been using from then on.

This is great basic introduction to statistics and the use of R. With outside material it could be the main text for an undergraduate course, and it could certainly be the lab manual for a basic stats course that also introduced the use of R.

good book for my stats class

This book has everything that an R user needs all the way down to a code script. I will be pulling from this book for years to come!

This book should be on the desk of any person learning how to use R - especially Biological Sciences graduate students as R is becoming an integral part of how we analyze data from our research.

Great well-written book. Good for learning how to run common statistical analyses in R. Chapter's 1,2, and 10 are also great for learning basic R data management. I would definitely recommend it to

both new and existing users of R.

Very good product

Introductory Statistics with R (Statistics and Computing) Biomedical Statistics with Computing (Medical Computing Series) Statistics for People Who (Think They) Hate Statistics (Salkind, Statistics for People Who(Think They Hate Statistics(Without CD)) Computational Statistics (Statistics and Computing) Modern Applied Statistics with S (Statistics and Computing) Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing (History of Computing) Introduction to Probability and Statistics: Principles and Applications for Engineering and the Computing Sciences The Grammar of Graphics (Statistics and Computing) Introductory DC/AC Electronics And Introductory DC/AC Circuits: Laboratory Manual, 6th Edition Introductory Statistics for Business and Economics, 4th Edition IBM SPSS for Introductory Statistics: Use and Interpretation, Fifth Edition Introductory Statistics Introductory Statistics (10th Edition) Introductory Biological Statistics Statistics and Data Analysis for Financial Engineering: with R examples (Springer Texts in Statistics) Basic Statistics for Business and Economics (Irwin Statistics) Statistics and Finance: An Introduction (Springer Texts in Statistics) Matrix Algebra Useful for Statistics (Wiley Series in Probability and Statistics) Matrix Algebra: Theory, Computations, and Applications in Statistics (Springer Texts in Statistics) Using IBMÃ Â® SPSSÃ Â® Statistics for Research Methods and Social Science Statistics