The book was found

Regression Methods In Biostatistics: Linear, Logistic, Survival, And Repeated Measures Models (Statistics For Biology And Health)
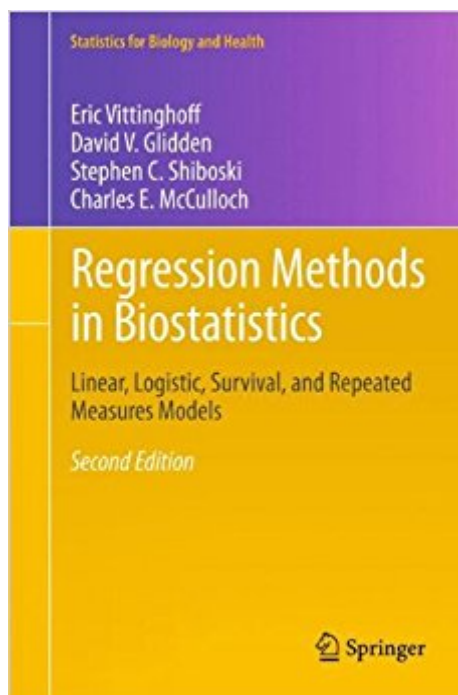
Synopsis

This new book provides a unified, in-depth, readable introduction to the multipredictor regression methods most widely used in biostatistics: linear models for continuous outcomes, logistic models for binary outcomes, the Cox model for right-censored survival times, repeated-measures models for longitudinal and hierarchical outcomes, and generalized linear models for counts and other outcomes. Treating these topics together takes advantage of all they have in common. The authors point out the many-shared elements in the methods they present for selecting, estimating, checking, and interpreting each of these models. They also show that these regression methods deal with confounding, mediation, and interaction of causal effects in essentially the same way. The examples, analyzed using Stata, are drawn from the biomedical context but generalize to other areas of application. While a first course in statistics is assumed, a chapter reviewing basic statistical methods is included. Some advanced topics are covered but the presentation remains intuitive. A brief introduction to regression analysis of complex surveys and notes for further reading are provided.

Book Information

Series: Statistics for Biology and Health

Hardcover: 512 pages

Publisher: Springer; 2nd ed. 2012 edition (September 1, 2011)

Language: English

ISBN-10: 1461413524

ISBN-13: 978-1461413523

Product Dimensions: 6.1 x 1.1 x 9.2 inches

Shipping Weight: 2.2 pounds (View shipping rates and policies)

Average Customer Review: 4.2 out of 5 stars   11 customer reviews

Best Sellers Rank: #84,450 in Books (See Top 100 in Books)   #33 inÃ Â Books > Textbooks > Medicine & Health Sciences > Research > Biostatistics   #47 inÃ Â Books > Medical Books > Basic Sciences > Biostatistics   #90 inÃ Â Books > Textbooks > Medicine & Health Sciences > Research > Epidemiology

Customer Reviews

From the reviews: "This book provides a unified introduction to the regression methods listed in the title...The methods are well illustrated by data drawn from medical studies...A real strength of this book is the careful discussion of issues common to all of the multipredictor methods covered."

Journal of Biopharmaceutical Statistics, 2005 "This book is not just for biostatisticians. It is, in fact, a very good, and relatively nonmathematical, overview of multipredictor regression models. Although the examples are biologically oriented, they are generally easy to understand and follow...I heartily recommend the book" Technometrics, February 2006 "Overall, the text provides an overview of regression methods that is particularly strong in its breadth of coverage and emphasis on insight in place of mathematical detail. As intended, this well-unified approach should appeal to students who learn conceptually and verbally." Journal of the American Statistical Association, March 2006 "This book is Ã¢â ¬Â| about regression methods, with examples and terminology from the biostatistics field. It should, however, also be useful for practitioners from other disciplines where regression methods can be applied. Ã¢â ¬Â| Most chapters end with a Problems section, and a section of further notes and references, making the book suitable as a text for a course on regression methods for Ph. D. students in medicine Ã¢â ¬Â| . Many of the analyses in the book are illustrated with output from the statistical package Stata." (GÃƒÂ¶ran BrostrÃƒÂ¶m, Zentralblatt MATH, Vol. 1069, 2005) "The authors have written have written the book with the intention to provide an accessible introduction to multipredictor methods, emphasizing their proper use and interpretation. Ã¢â ¬Â| In summary it may be said that this book is excellently readable. Because of the Ã¢â ¬Â| detailed aspects of modeling, the applied tips as well as many medical examples, it can be recommended ... . In addition it can be recommended as background literature for biometrics advisors because of the high didactic quality of the book." (Rainer Muche, ISBC Newsletter, Issue 42, 2006) "The authors have written a very readable book focusing on the most widely used regression models in biostatistics: Multiple linear regression, logistic regression and Cox regression. Ã¢â ¬Â| The book is written for a non-statistical audience, focusing on ideas and how to interpret results Ã¢â ¬Â| . The book will be Ã¢â ¬Â| useful as a reference to give to a non-statistical colleague Ã¢â ¬Â| ." (Soren Feodor Nielsen, Journal of Applied Statistics, Vol. 33 (6), 2006) "Readership: Biostatistics readers, post-graduate research physicians. Ã¢â ¬Â| This text is nicely written and well arranged and provides excellent, reasonably brief, information on the selected-topics." (N. R. Draper, Short Book Reviews, Vol. 25 (2), 2005) "This book is designed for those who want to use statistical tools in the biosciences. Ã¢â ¬Â| It provides an excellent exposition of the application of different tools of regression analysis in biostatistics. Ã¢â ¬Â| This book can be a bridge between biostatistics and regression analysis Ã¢â ¬Â| . Survival analysis, repeated measurement analysis and generalized linear models are covered comprehensively. It could be used as a text-book for an advanced course in biostatistics, and it will also be helpful to biostatisticians Ã¢â ¬Â| ." (Shalabh, Journal of the Royal Statistical Society, Vol. 169 (1), 2006) "The focus is on understanding key statistical and analytical

concepts--interpreting regression coefficients, understanding the impact of the failure of model assumptions, grasping how correlation in clustered sample designs affects analysis--rather than on mathematical derivations." (Michael Elliott, Biometrics, December 2006)

This new edition provides a unified, in-depth, readable introduction to the multipredictor regression methods most widely used in biostatistics: linear models for continuous outcomes, logistic models for binary outcomes, the Cox model for right-censored survival times, repeated-measures models for longitudinal and hierarchical outcomes, and generalized linear models for counts and other outcomes. Treating these topics together takes advantage of all they have in common. The authors point out the many-shared elements in the methods they present for selecting, estimating, checking, and interpreting each of these models. They also show that these regression methods deal with confounding, mediation, and interaction of causal effects in essentially the same way. The examples, analyzed using Stata, are drawn from the biomedical context but generalize to other areas of application. While a first course in statistics is assumed, a chapter reviewing basic statistical methods is included. Some advanced topics are covered but the presentation remains intuitive. A brief introduction to regression analysis of complex surveys and notes for further reading are provided. For many students and researchers learning to use these methods, this one book may be all they need to conduct and interpret multipredictor regression analyses. In the second edition, the authors have substantially expanded the core chapters, including new coverage of exact, ordinal, and multinomial logistic models, discrete time and competing risks survival models, within and between effects in longitudinal models, zero-inflated Poisson and negative binomial models, cross-validation for prediction model selection, directed acyclic graphs, and sample size, power and minimum detectable effect calculations; Stata code is also updated. In addition, there are new chapters on methods for strengthening causal inference, including propensity scores, marginal structural models, and instrumental variables,Ã Â and on methods for handling missing data, using maximum likelihood, multiple imputation, inverse weighting, and pattern mixture models.From the reviews of the first edition: "This book provides a unified introduction to the regression methods listed in the title...The methods are well illustrated by data drawn from medical studies...A real strength of this book is the careful discussion of issues common to all of the multipredictor methods covered." Journal of Biopharmaceutical Statistics, 2005"This book is not just for biostatisticians. It is, in fact, a very good, and relatively nonmathematical, overview of multipredictor regression models. Although the examples are biologically oriented, they are generally easy to understand and follow...I heartily recommend the book" Technometrics, February 2006"Overall, the text provides an overview

of regression methods that is particularly strong in its breadth of coverage and emphasis on insight in place of mathematical detail. As intended, this well-unified approach should appeal to students who learn conceptually and verbally." Journal of the American Statistical Association, March 2006

Overall a very excellent, broad yet detailed overview of regression and statistical methods for parsing meaning and substance from different epidemiologic and/or other health-related investigations. One caveat: the writing is extremely verbose and geared toward analytic, mathematical parsing of meaning in context of data graphical overlays. Can be understood by any functional graduate student with robust quantitative skills, but is still a bit awkward/stilted in how the information is conveyed with numbering of tables, graphs, etc., in reference to textual explanations. Other than that, kudos. Very helpful.

You can actually read this book - which is surprising given the subject. I'm a grad student taking two Biostats courses for a master's degree. This book is great and conceptual.

Vittinghoff is very verbose in explanations of the methods within, but this is very useful to newcomers in the field. The examples are robust and coded in a number of common statistical programming environments.

The Kindle version struggles with the formatting of math equations and isn't much cheaper (albeit more convenient) than the hard copy. I would seriously consider ordering the actual book if I hadn't already purchased the Kindle version.

Useful book, but hard to read. The writing often requires you to re-read passages before you can understand what the authors mean. This book is a bible, and necessary, but it would benefit from some editing.

This book is very readable, and an excellent resource.

Whilst I have a library of StataPress books, this is the one I turn to try to understand what I should try to achieve

not for biginner.it is very difficult

Regression Methods in Biostatistics: Linear, Logistic, Survival, and Repeated Measures Models (Statistics for Biology and Health) Logistic Regression: A Self-Learning Text (Statistics for Biology and Health) Applied Logistic Regression Applied Logistic Regression Analysis (Quantitative Applications in the Social Sciences) Jekel's Epidemiology, Biostatistics, Preventive Medicine, and Public Health: With STUDENT CONSULT Online Access, 4e (Jekel's Epidemiology, Biostatistics, Preventive Medicine, Public Health) Plots, Transformations, and Regression: An Introduction to Graphical Methods of Diagnostic Regression Analysis (Oxford Statistical Science Series) Applied Linear Regression Models- 4th Edition with Student CD (McGraw Hill/Irwin Series: Operations and Decision Sciences) Applied Regression Analysis and Generalized Linear Models Survival: Survival Guide: Survival Skills, Survival Tools, & Survival Tactics. Emergency Prepping, & Surving A Disaster! (First Aid, Survival Skills, Emergency ... Medicine, Bushcraft, Home Defense Book 1) Statistics for People Who (Think They) Hate Statistics (Salkind, Statistics for People Who(Think They Hate Statistics(Without CD)) Regression to Times and Places (Meditation Regression) Forecasting, Time Series, and Regression (with CD-ROM) (Forecasting, Time Series, & Regression) Spiritual Progress Through Regression (Meditation Regression) Regression Through The Mirrors of Time (Meditation Regression) 3 TG/Age Regression Summer Stories (TG Age Regression Stories) Primer of Biostatistics, Seventh Edition (Primer of Biostatistics (Glantz)(Paperback)) Multiple Regression: A Primer (Research Methods and Statistics) Mouse Models of Allergic Disease: Methods and Protocols (Methods in Molecular Biology) Generalized Linear Models, Second Edition (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) Linear Mixed Models in Practice: A SAS-Oriented Approach (Lecture Notes in Statistics)