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**Handbook of Regression Modeling in People Analytics** - Keith McNulty 2021-07-29
Despite the recent rapid growth in machine learning and predictive analytics, many of the statistical questions that are faced by researchers and practitioners still involve explaining why something is happening. Regression analysis is the best 'swiss army knife' we have for answering these kinds of questions. This book is a learning resource on inferential statistics and regression analysis. It teaches how to do a wide range of statistical analyses in both R and in Python, ranging from simple hypothesis testing to advanced multivariate modelling. Although it is primarily focused on examples related to the analysis of people and talent, the methods easily transfer to any discipline. The book hits a 'sweet spot' where there is just enough mathematical theory to support a strong understanding of the methods, but with a step-by-step guide and easily reproducible examples and code, so that the methods can be put into practice immediately. This makes the book accessible to a wide readership, from public and private sector analysts and practitioners to students and researchers. Key Features: • 16 accompanying datasets across a wide range of contexts (e.g. academic, corporate, sports, marketing) • Clear step-by-step instructions on executing the analyses. • Clear guidance on how to interpret results. • Primary instruction in R but added sections for Python coders. • Discussion exercises and data

exercises for each of the main chapters. • Final chapter of practice material and datasets ideal for class homework or project work.
Best Practices in Logistic Regression - Jason W. Osborne 2014-02-26
Jason W. Osborne's Best Practices in Logistic Regression provides students with an accessible, applied approach that communicates logistic regression in clear and concise terms. The book effectively leverages readers' basic intuitive understanding of simple and multiple regression to guide them into a sophisticated mastery of logistic regression. Osborne's applied approach offers students and instructors a clear perspective, elucidated through practical and engaging tools that encourage student comprehension.
Machine Learning Using R - Karthik Ramasubramanian 2016-12-22
Examine the latest technological advancements in building a scalable machine learning model with Big Data using R. This book shows you how to work with a machine learning algorithm and use it to build a ML model from raw data. All practical demonstrations will be explored in R, a powerful programming language and software environment for statistical computing and graphics. The various packages and methods available in R will be used to explain the topics. For every machine learning algorithm covered in this book, a 3-D approach of theory, case-study and practice will be given. And where appropriate, the mathematics will be explained through visualization in R. All the images

are available in color and hi-res as part of the code download. This new paradigm of teaching machine learning will bring about a radical change in perception for many of those who think this subject is difficult to learn. Though theory sometimes looks difficult, especially when there is heavy mathematics involved, the seamless flow from the theoretical aspects to example-driven learning provided in this book makes it easy for someone to connect the dots.. What You'll Learn Use the model building process flow Apply theoretical aspects of machine learning Review industry-based cae studies Understand ML algorithms using R Build machine learning models using Apache Hadoop and Spark Who This Book is For Data scientists, data science professionals and researchers in academia who want to understand the nuances of machine learning approaches/algorithms along with ways to see them in practice using R. The book will also benefit the readers who want to understand the technology behind implementing a scalable machine learning model using Apache Hadoop, Hive, Pig and Spark.

**Multiple Regression with Discrete Dependent Variables** - John G. Orme 2009-03-25
Most social work researchers are familiar with linear regression techniques, which are fairly straightforward to conduct, interpret, and present. However, linear regression is not appropriate for discrete dependent variables, and social work research frequently employs these variables, focusing on outcomes such as placement in foster care or not; level of severity of elder abuse or depression symptoms; or number of reoffenses by juvenile delinquents in the year following adjudication. This book presents detailed discussions of regression models that are appropriate for a variety of discrete dependent variables. The major challenges of such analyses lie in the non-linear relationships between independent and dependent variables, and particularly in interpreting and presenting findings. Clear language guides the reader briefly through each step of the analysis, using SPSS and result presentation to enhance understanding of the important link function. The book begins with a brief review of linear regression; next, the authors cover basic binary logistic regression, which provides a foundation for the other techniques. In particular, comprehension of the link function is vital in order to later interpret these methods' results. Though the book assumes a basic understanding of linear regression, reviews and definitions throughout provide useful reminders of important terms and their meaning, and throughout the book the authors provide detailed examples based on their own data, which readers may work through by accessing the data and output on companion website. Social work and other social sciences faculty, students, and researchers who already have a basic understanding of linear regression but are not as familiar with the regression analysis of discrete dependent variables will find this straightforward pocket guide to be a terrific boon to their bookshelves. For additional resources, visit http://www.oup.com/us/pocketguides.

**Applied Logistic Regression, Second Edition: Book and Solutions Manual Set** - David W. Hosmer, Jr. 2001-11-13
From the reviews of the First Edition. "An interesting, useful, and well-written book on logistic regression models . . . Hosmer and Lemeshow have used very little mathematics, have presented difficult concepts heuristically and through illustrative examples, and have included references." —Choice "Well written, clearly organized, and comprehensive . . . the authors carefully walk the reader through the estimation of interpretation of coefficients from a wide variety of logistic regression models . . . their careful explication of the quantitative re-expression of coefficients from these various models is excellent." —Contemporary Sociology "An extremely well-written book that will certainly prove an invaluable acquisition to the practicing statistician who finds other literature on analysis of discrete data hard to follow or heavily theoretical." —The Statistician In this revised and updated edition of their popular book, David Hosmer and Stanley Lemeshow continue to provide an amazingly accessible introduction to the logistic regression model while incorporating advances of the last decade, including a variety of software packages for the analysis of data sets. Hosmer and Lemeshow extend the discussion from biostatistics and epidemiology to cutting-edge applications in data mining and machine learning, guiding readers step-by-step through the use of modeling

techniques for dichotomous data in diverse fields. Ample new topics and expanded discussions of existing material are accompanied by a wealth of real-world examples-with extensive data sets available over the Internet.

**Applied Logistic Regression Analysis** - Scott Menard 2002
The focus in this Second Edition is again on logistic regression models for individual level data, but aggregate or grouped data are also considered. The book includes detailed discussions of goodness of fit, indices of predictive efficiency, and standardized logistic regression coefficients, and examples using SAS and SPSS are included. More detailed consideration of grouped as opposed to case-wise data throughout the book Updated discussion of the properties and appropriate use of goodness of fit measures, R-square analogues, and indices of predictive efficiency Discussion of the misuse of odds ratios to represent risk ratios, and of over-dispersion and under-dispersion for grouped data Updated coverage of unordered and ordered polytomous logistic regression models.

Best Practices in Logistic Regression - Jason W. Osborne 2014-02-26
Jason W. Osborne's Best Practices in Logistic Regression provides students with an accessible, applied approach that communicates logistic regression in clear and concise terms. The book effectively leverages readers' basic intuitive understanding of simple and multiple regression to guide them into a sophisticated mastery of logistic regression. Osborne's applied approach offers students and instructors a clear perspective, elucidated through practical and engaging tools that encourage student comprehension.

**Regression Models for Categorical and Limited Dependent Variables** - J. Scott Long 1997-01-09
The linear regression model is the most commonly used statistical method in the social sciences. This book considers regression models that are appropriate when the dependent variable is censored, truncated, binary, ordinal, nominal, or count. I refer to these variables as categorical and limited dependent variables (hereafter CLDVs). Until recently, the greatest obstacle in using models for CLDVs was the lack of software that was flexible, stable, and easy to use. This limitation no longer applies since these models can be estimated routinely with standard software. Now, the greatest impediment is the complexity of the models and the difficulty in interpreting the results. The difficulties arise because most models for CLDVs are nonlinear.

A Handbook of Statistical Analyses using R - Torsten Hothorn 2014-05-30
Like the best-selling first two editions, A Handbook of Statistical Analyses using R, Third Edition provides an up-to-date guide to data analysis using the R system for statistical computing. The book explains how to conduct a range of statistical analyses, from simple inference to recursive partitioning to cluster analysis.New to the Third Edition

**Fundamentals of Predictive Analytics with JMP, Second Edition** - Ron Klimberg 2017-12-19
Written for students in undergraduate and graduate statistics courses, as well as for the practitioner who wants to make better decisions from data and models, this updated and expanded second edition of Fundamentals of Predictive Analytics with JMP(R) bridges the gap between courses on basic statistics, which focus on univariate and bivariate analysis, and courses on data mining and predictive analytics. Going beyond the theoretical foundation, this book gives you the technical knowledge and problem-solving skills that you need to perform real-world multivariate data analysis. First, this book teaches you to recognize when it is appropriate to use a tool, what variables and data are required, and what the results might be. Second, it teaches you how to interpret the results and then, step-by-step, how and where to perform and evaluate the analysis in JMP . Using JMP 13 and JMP 13 Pro, this book offers the following new and enhanced features in an example-driven format: an add-in for Microsoft Excel Graph Builder dirty data visualization regression ANOVA logistic regression principal component analysis LASSO elastic net cluster analysis decision trees k-nearest neighbors neural networks bootstrap forests boosted trees text mining association rules model comparison With today's emphasis on business intelligence, business analytics, and predictive analytics, this second edition is invaluable to anyone who needs to expand his or her knowledge of

statistics and to apply real-world, problem-solving analysis. This book is part of the SAS Press program.

**Logistic Regression** - David G. Kleinbaum 2013-11-11
This text on logistic regression methods contains the following eight chapters: 1 Introduction to Logistic Regression 2 Important Special Cases of the Logistic Model 3 Computing the Odds Ratio in Logistic Regression 4 Maximum Likelihood Techniques: An Overview 5 Statistical Inferences Using Maximum Likelihood Techniques 6 Modeling Strategy Guidelines 7 Modeling Strategy for Assessing Interaction and Confounding 8 Analysis of Matched Data Using Logistic Regression Each chapter contains a presentation of its topic in "lecture-book" format together with objectives, an outline, key formulae, practice exercises, and a test. The "lecture-book" has a sequence of illustrations and formulae in the left column of each page and a script in the right column. This format allows you to read the script in conjunction with the illustrations and formulae that high light the main points, formulae, or examples being presented. The reader mayaiso purchase directly from the author audio-cassette tapes of each chapter. If you purchase the tapes, you may use the tape with the illustrations and formulae, ignoring the script. The use of the audiotape with the illustrations and formulae is intended to be similar to a lecture. An audio cassette player is the only equipment required. Tapes may be obtained by writing or calling the author at the following address: Depart ment of Epidemiology, School of Public Health, Emory University, 1599 Clifton Rd. N. E. , Atlanta, GA 30333, phone (404) 727-9667. This text is intended for self-study.

**Practical Statistics** - David Kremelberg 2010-03-18
Making statistics—and statistical software—accessible and rewarding This book provides readers with step-by-step guidance on running a wide variety of statistical analyses in IBM® SPSS® Statistics, Stata, and other programs. Author David Kremelberg begins his user-friendly text by covering charts and graphs through regression, time-series analysis, and factor analysis. He provides a background of the method, then explains how to run these tests in IBM SPSS and Stata. He then progresses to more advanced kinds of statistics such as HLM and SEM, where he describes the tests and explains how to run these tests in their appropriate software including HLM and AMOS. This is an invaluable guide for upper-level undergraduate and graduate students across the social and behavioral sciences who need assistance in understanding the various statistical packages.

**Advanced Techniques of Population Analysis** - S.S. Halli 1992-03-31
Utilizing the most recent developments in statistical modeling as applied to population studies, the authors interpret results obtained from available software and apply these results to current research issues.

*The SAGE Encyclopedia of Communication Research Methods* - Mike Allen 2017-04-11
Communication research is evolving and changing in a world of online journals, open-access, and new ways of obtaining data and conducting experiments via the Internet. Although there are generic encyclopedias describing basic social science research methodologies in general, until now there has been no comprehensive A-to-Z reference work exploring methods specific to communication and media studies. Our entries, authored by key figures in the field, focus on special considerations when applied specifically to communication research, accompanied by engaging examples from the literature of communication, journalism, and media studies. Entries cover every step of the research process, from the creative development of research topics and questions to literature reviews, selection of best methods (whether quantitative, qualitative, or mixed) for analyzing research results and publishing research findings, whether in traditional media or via new media outlets. In addition to expected entries covering the basics of theories and methods traditionally used in communication research, other entries discuss important trends influencing the future of that research, including contemporary practical issues students will face in communication professions, the influences of globalization on research, use of new recording technologies in fieldwork, and the challenges and opportunities related to studying online multi-media environments. Email, texting, cellphone video, and blogging are shown not only as topics of research but also as means of collecting and analyzing data.

Still other entries delve into considerations of accountability, copyright, confidentiality, data ownership and security, privacy, and other aspects of conducting an ethical research program. Features: 652 signed entries are contained in an authoritative work spanning four volumes available in choice of electronic or print formats. Although organized A-to-Z, front matter includes a Reader's Guide grouping entries thematically to help students interested in a specific aspect of communication research to more easily locate directly related entries. Back matter includes a Chronology of the development of the field of communication research; a Resource Guide to classic books, journals, and associations; a Glossary introducing the terminology of the field; and a detailed Index. Entries conclude with References/Further Readings and Cross-References to related entries to guide students further in their research journeys. The Index, Reader's Guide themes, and Cross-References combine to provide robust search-and-browse in the e-version.

Odds Ratios in the Analysis of Contingency Tables - Tamás Rudas 1998
In this volume the author shows how odds ratios can be used as a framework for understanding log-linear models. The book moves from paradigmatic 2x2 case to more complicated cases. The author also carefully defines the odds ratio.

**Logit Modeling** - Alfred DeMaris 1992-06-06
Logit models : theoretical background. Logit models for multidimensional tables. Logistic regression. Advanced topics in logistic regression. Appendix : Computer routines.

Statistics Applied to Clinical Trials - Ton J. Cleophas 2013-11-11
In 1948 the first randomized controlled trial was published by the English Medical Research Council in the British Medical Journal. Until then, observations had been uncontrolled. Initially, trials frequently did not confirm the hypotheses to be tested. This phenomenon was attributed to low sensitivity due to small samples, as well as inappropriate hypotheses based on biased prior trials. Additional flaws were recognized and, subsequently, were better accounted for: carryover effects due to insufficient washout from previous treatments, time effects due to external factors and the natural history of the condition under study, bias due to asymmetry between treatment groups, lack of sensitivity due to a negative correlation between treatment responses, and so on. Such flaws, mainly of a technical nature, have been largely corrected and led to trials after 1970 being of significantly higher quality. The past decade has focused, in addition to technical aspects, on the need for circumspection in the planning and conducting of clinical trials. As a consequence, prior to approval, clinical trial protocols are now routinely scrutinized by different circumstantial organs, including ethics committees, institutional and federal review boards, national and international scientific organizations, and monitoring committees charged with conducting interim analyses. This book not only explains classical statistical analyses of clinical trials, but also addresses relatively novel issues, including equivalence testing, interim analyses, sequential analyses, and meta-analyses, and provides a framework of the best statistical methods currently available for such purposes. This book is not only useful for investigators involved in the field of clinical trials, but also for all physicians who wish to better understand the data of trials as currently published.

**Logistic Regression Inside and Out** - Jeffrey Strickland 2017-03-13
If you have a yes or no question, then you can probably answer it with a logistic regression model. Logistic regression is most appropriate when the dependent variable has two possible outcomes. Will customers respond to an offer or unsubscribe, will the enemy fight or flee, will subjects respond to treatment or grow ill, will livestock live or die? Yes or no? I am often asked if logistic regression is a machine learning algorithm. I say that it is not, for I can formulate it mathematically and solve it using matrix equations, for example. Its solution is derived deterministically, and estimation is performed mathematically, through optimization methods. The logit link functionis the mathematical expression-a nonlinear, exponential equation, and we transform it to a linear equation by applying the natural logarithm. Here we find mathematical modeling, probability, and statistics. Here I will take you on a journey into the art and science of predictive modeling using logistic regression, inside-and-out.

**Logistic Regression Models for Ordinal Response Variables** - Ann A. O'Connell 2006
Ordinal measures provide a simple and convenient way to distinguish among possible outcomes. The book provides practical guidance on using ordinal outcome models.

Modelling Binary Data, Second Edition - D. Collett 1991-10
A textbook of an intermediate level, this work shows how binary data can be analyzed using a modelling approach, dwelling on practical aspects, incorporating recent work on checking the adequacy of fitted models and showing how computational facilities can be exploited.

*Practical Guide to Logistic Regression* - Joseph M. Hilbe 2016-04-05
Practical Guide to Logistic Regression covers the key points of the basic logistic regression model and illustrates how to use it properly to model a binary response variable. This powerful methodology can be used to analyze data from various fields, including medical and health outcomes research, business analytics and data science, ecology, fisheries, astronomy, transportation, insurance, economics, recreation, and sports. By harnessing the capabilities of the logistic model, analysts can better understand their data, make appropriate predictions and classifications, and determine the odds of one value of a predictor compared to another. Drawing on his many years of teaching logistic regression, using logistic-based models in research, and writing about the subject, Professor Hilbe focuses on the most important features of the logistic model. Serving as a guide between the author and readers, the book explains how to construct a logistic model, interpret coefficients and odds ratios, predict probabilities and their standard errors based on the model, and evaluate the model as to its fit. Using a variety of real data examples, mostly from health outcomes, the author offers a basic step-by-step guide to developing and interpreting observation and grouped logistic models as well as penalized and exact logistic regression. He also gives a step-by-step guide to modeling Bayesian logistic regression. R statistical software is used throughout the book to display the statistical models while SAS and Stata codes for all examples are included at the end of each chapter. The example code can be adapted to readers' own analyses. All the code is available on the author's website.

*Logistic Regression Models* - Joseph M. Hilbe 2009-05-11
Logistic Regression Models presents an overview of the full range of logistic models, including binary, proportional, ordered, partially ordered, and unordered categorical response regression procedures. Other topics discussed include panel, survey, skewed, penalized, and exact logistic models. The text illustrates how to apply the various models to health, environmental, physical, and social science data. Examples illustrate successful modeling The text first provides basic terminology and concepts, before explaining the foremost methods of estimation (maximum likelihood and IRLS) appropriate for logistic models. It then presents an in-depth discussion of related terminology and examines logistic regression model development and interpretation of the results. After focusing on the construction and interpretation of various interactions, the author evaluates assumptions and goodness-of-fit tests that can be used for model assessment. He also covers binomial logistic regression, varieties of overdispersion, and a number of extensions to the basic binary and binomial logistic model. Both real and simulated data are used to explain and test the concepts involved. The appendices give an overview of marginal effects and discrete change as well as a 30-page tutorial on using Stata commands related to the examples used in the text. Stata is used for most examples while R is provided at the end of the chapters to replicate examples in the text. Apply the models to your own data Data files for examples and questions used in the text as well as code for user-authored commands are provided on the book's website, formatted in Stata, R, Excel, SAS, SPSS, and Limdep. See Professor Hilbe discuss the book.

**Applied Logistic Regression** - David W. Hosmer, Jr. 2004-10-28
From the reviews of the First Edition. "An interesting, useful, and well-written book on logistic regression models . . . Hosmer and Lemeshow have used very little mathematics, have presented difficult concepts heuristically and through illustrative examples, and have included references." —Choice "Well written, clearly organized, and comprehensive . . . the authors carefully walk the reader through the

estimation of interpretation of coefficients from a wide variety of logistic regression models . . . their careful explication of the quantitative re-expression of coefficients from these various models is excellent." —Contemporary Sociology "An extremely well-written book that will certainly prove an invaluable acquisition to the practicing statistician who finds other literature on analysis of discrete data hard to follow or heavily theoretical." —The Statistician In this revised and updated edition of their popular book, David Hosmer and Stanley Lemeshow continue to provide an amazingly accessible introduction to the logistic regression model while incorporating advances of the last decade, including a variety of software packages for the analysis of data sets. Hosmer and Lemeshow extend the discussion from biostatistics and epidemiology to cutting-edge applications in data mining and machine learning, guiding readers step-by-step through the use of modeling techniques for dichotomous data in diverse fields. Ample new topics and expanded discussions of existing material are accompanied by a wealth of real-world examples-with extensive data sets available over the Internet.

*Interaction Effects in Logistic Regression* - James Jaccard 2001-02-21
This book provides an introduction to the analysis of interaction effects in logistic regression by focusing on the interpretation of the coefficients of interactive logistic models for a wide range of situations encountered in the research literature. The volume is oriented toward the applied researcher with a rudimentary background in multiple regression and logistic regression and does not include complex formulas that could be intimidating to the applied researcher.Learn more about "The Little Green Book" - QASS Series! Click Here

*Statistical Models in Epidemiology* - David Clayton 2013-01-17
This self-contained account of the statistical basis of epidemiology has been written for those with a basic training in biology. It is specifically intended for students enrolled for a masters degree in epidemiology, clinical epidemiology, or biostatistics.

**The SAGE Handbook of Regression Analysis and Causal Inference** - Henning Best 2014-09-27

'The editors of the new SAGE Handbook of Regression Analysis and Causal Inference have assembled a wide-ranging, high-quality, and timely collection of articles on topics of central importance to quantitative social research, many written by leaders in the field. Everyone engaged in statistical analysis of social-science data will find something of interest in this book.' - John Fox, Professor, Department of Sociology, McMaster University 'The authors do a great job in explaining the various statistical methods in a clear and simple way - focussing on fundamental understanding, interpretation of results, and practical application - yet being precise in their exposition.' - Ben Jann, Executive Director, Institute of Sociology, University of Bern 'Best and Wolf have put together a powerful collection, especially valuable in its separate discussions of uses for both cross-sectional and panel data analysis.' - Tom Smith, Senior Fellow, NORC, University of Chicago Edited and written by a team of leading international social scientists, this Handbook provides a comprehensive introduction to multivariate methods. The Handbook focuses on regression analysis of cross-sectional and longitudinal data with an emphasis on causal analysis, thereby covering a large number of different techniques including selection models, complex samples, and regression discontinuities. Each Part starts with a non-mathematical introduction to the method covered in that section, giving readers a basic knowledge of the method's logic, scope and unique features. Next, the mathematical and statistical basis of each method is presented along with advanced aspects. Using real-world data from the European Social Survey (ESS) and the Socio-Economic Panel (GSOEP), the book provides a comprehensive discussion of each method's application, making this an ideal text for PhD students and researchers embarking on their own data analysis.

Regression Analysis of Count Data - A. Colin Cameron 2013-05-27
This book provides the most comprehensive and up-to-date account of regression methods to explain the frequency of events.

**Beyond Multiple Linear Regression** - Paul Roback 2021-01-14
Beyond Multiple Linear Regression: Applied Generalized Linear Models and Multilevel Models in R is designed for undergraduate students who

have successfully completed a multiple linear regression course, helping them develop an expanded modeling toolkit that includes non-normal responses and correlated structure. Even though there is no mathematical prerequisite, the authors still introduce fairly sophisticated topics such as likelihood theory, zero-inflated Poisson, and parametric bootstrapping in an intuitive and applied manner. The case studies and exercises feature real data and real research questions; thus, most of the data in the textbook comes from collaborative research conducted by the authors and their students, or from student projects. Every chapter features a variety of conceptual exercises, guided exercises, and open-ended exercises using real data. After working through this material, students will develop an expanded toolkit and a greater appreciation for the wider world of data and statistical modeling. A solutions manual for all exercises is available to qualified instructors at the book's website at www.routledge.com, and data sets and Rmd files for all case studies and exercises are available at the authors' GitHub repo (https://github.com/proback/BeyondMLR)

**Best Practices in Quantitative Methods** - Jason W. Osborne 2008
The contributors to Best Practices in Quantitative Methods envision quantitative methods in the 21st century, identify the best practices, and, where possible, demonstrate the superiority of their recommendations empirically. Editor Jason W. Osborne designed this book with the goal of providing readers with the most effective, evidence-based, modern quantitative methods and quantitative data analysis across the social and behavioral sciences. The text is divided into five main sections covering select best practices in Measurement, Research Design, Basics of Data Analysis, Quantitative Methods, and Advanced Quantitative Methods. Each chapter contains a current and expansive review of the literature, a case for best practices in terms of method, outcomes, inferences, etc., and broad-ranging examples along with any empirical evidence to show why certain techniques are better. Key Features: Describes important implicit knowledge to readers: The chapters in this volume explain the important details of seemingly mundane aspects of quantitative research, making them accessible to readers and demonstrating why it is important to pay attention to these details. Compares and contrasts analytic techniques: The book examines instances where there are multiple options for doing things, and make recommendations as to what is the "best" choice—or choices, as what is best often depends on the circumstances. Offers new procedures to update and explicate traditional techniques: The featured scholars present and explain new options for data analysis, discussing the advantages and disadvantages of the new procedures in depth, describing how to perform them, and demonstrating their use. Intended Audience: Representing the vanguard of research methods for the 21st century, this book is an invaluable resource for graduate students and researchers who want a comprehensive, authoritative resource for practical and sound advice from leading experts in quantitative methods.

**Applied Logistic Regression** - David W. Hosmer, Jr. 2013-02-26
A new edition of the definitive guide to logistic regression modeling for health science and other applications This thoroughly expanded Third Edition provides an easily accessible introduction to the logistic regression (LR) model and highlights the power of this model by examining the relationship between a dichotomous outcome and a set of covariables. Applied Logistic Regression, Third Edition emphasizes applications in the health sciences and handpicks topics that best suit the use of modern statistical software. The book provides readers with state-of-the-art techniques for building, interpreting, and assessing the performance of LR models. New and updated features include: A chapter on the analysis of correlated outcome data A wealth of additional material for topics ranging from Bayesian methods to assessing model fit Rich data sets from real-world studies that demonstrate each method under discussion Detailed examples and interpretation of the presented results as well as exercises throughout Applied Logistic Regression, Third Edition is a must-have guide for professionals and researchers who need to model nominal or ordinal scaled outcome variables in public health, medicine, and the social sciences as well as a wide range of other fields and disciplines.

**Regression Models for Categorical Dependent Variables Using**

**Stata, Second Edition** - J. Scott Long 2006
The goal of the book is to make easier to carry out the computations necessary for the full interpretation of regression nonlinear models for categorical outcomes usign Stata.

**Logistic Regression** - Scott Menard 2010
Logistic Regression is designed for readers who have a background in statistics at least up to multiple linear regression, who want to analyze dichotomous, nominal, and ordinal dependent variables cross-sectionally and longitudinally.

**Clinical Trials in Neurology** - Roberto Guiloff 2001-05-05
Clinical Trials in Neurology comprehensively tackles the methodology and design of clinical trials in neurological disease. A general section deals with the ethical aspects, drug development and regulatory requirements, basic trial designs and the statistics used. A diseases section tackles specific aspects of disorders, focusing on the relevant ethical issues, outcome variables and experience with large multicentre trials.

*Logistic Regression Models for Ordinal Response Variables* - Ann A. O'Connell 2006
Ordinal measures provide a simple and convenient way to distinguish among possible outcomes. The book provides practical guidance on using ordinal outcome models.

*Logistic Regression* - Fred C. Pampel 2000-05-26
Trying to determine when to use a logistic regression and how to interpret the coefficients? Frustrated by the technical writing in other books on the topic? Pampel's book offers readers the first "nuts and bolts" approach to doing logist

Handbook of Statistical Methods for Case-Control Studies - Ørnulf Borgan 2018-06-27
Handbook of Statistical Methods for Case-Control Studies is written by leading researchers in the field. It provides an in-depth treatment of up-to-date and currently developing statistical methods for the design and analysis of case-control studies, as well as a review of classical principles and methods. The handbook is designed to serve as a reference text for biostatisticians and quantitatively-oriented epidemiologists who are working on the design and analysis of case-control studies or on related statistical methods research. Though not specifically intended as a textbook, it may also be used as a backup reference text for graduate level courses. Book Sections Classical designs and causal inference, measurement error, power, and small-sample inference Designs that use full-cohort information Time-to-event data Genetic epidemiology About the Editors Ørnulf Borgan is Professor of Statistics, University of Oslo. His book with Andersen, Gill and Keiding on counting processes in survival analysis is a world classic. Norman E. Breslow was, at the time of his death, Professor Emeritus in Biostatistics, University of Washington. For decades, his book with Nick Day has been the authoritative text on case-control methodology. Nilanjan Chatterjee is Bloomberg Distinguished Professor, Johns Hopkins University. He leads a broad research program in statistical methods for modern large scale biomedical studies. Mitchell H. Gail is a Senior Investigator at the National Cancer Institute. His research includes modeling absolute risk of disease, intervention trials, and statistical methods for epidemiology. Alastair Scott was, at the time of his death, Professor Emeritus of Statistics, University of Auckland. He was a major contributor to using survey sampling methods for analyzing case-control data. Chris J. Wild is Professor of Statistics, University of Auckland. His research includes nonlinear regression and methods for fitting models to response-selective data.

*Applied Ordinal Logistic Regression Using Stata* - Xing Liu 2015-09-30
The first book to provide a unified framework for both single-level and multilevel modeling of ordinal categorical data, Applied Ordinal Logistic Regression Using Stata by Xing Liu helps readers learn how to conduct analyses, interpret the results from Stata output, and present those results in scholarly writing. Using step-by-step instructions, this non-technical, applied book leads students, applied researchers, and practitioners to a deeper understanding of statistical concepts by closely connecting the underlying theories of models with the application of real-world data using statistical software.

*Interpretable Machine Learning* - Christoph Molnar 2020
This book is about making machine learning models and their decisions interpretable. After exploring the concepts of interpretability, you will learn about simple, interpretable models such as decision trees, decision rules and linear regression. Later chapters focus on general model-agnostic methods for interpreting black box models like feature importance and accumulated local effects and explaining individual predictions with Shapley values and LIME. All interpretation methods are explained in depth and discussed critically. How do they work under the hood? What are their strengths and weaknesses? How can their outputs be interpreted? This book will enable you to select and correctly apply the interpretation method that is most suitable for your machine learning project.

**Modern Epidemiology** - Kenneth J. Rothman 2008
The thoroughly revised and updated Third Edition of the acclaimed Modern Epidemiology reflects both the conceptual development of this evolving science and the increasingly focal role that epidemiology plays in dealing with public health and medical problems. Coauthored by three leading epidemiologists, with sixteen additional contributors, this Third Edition is the most comprehensive and cohesive text on the principles and methods of epidemiologic research. The book covers a broad range of concepts and methods, such as basic measures of disease frequency and associations, study design, field methods, threats to validity, and assessing precision. It also covers advanced topics in data analysis such as Bayesian analysis, bias analysis, and hierarchical regression. Chapters examine specific areas of research such as disease surveillance, ecologic studies, social epidemiology, infectious disease epidemiology, genetic

and molecular epidemiology, nutritional epidemiology, environmental epidemiology, reproductive epidemiology, and clinical epidemiology.

**R for Health Data Science** - Ewen Harrison 2020-12-31
In this age of information, the manipulation, analysis, and interpretation of data have become a fundamental part of professional life; nowhere more so than in the delivery of healthcare. From the understanding of disease and the development of new treatments, to the diagnosis and management of individual patients, the use of data and technology is now an integral part of the business of healthcare. Those working in healthcare interact daily with data, often without realising it. The conversion of this avalanche of information to useful knowledge is essential for high-quality patient care. R for Health Data Science includes everything a healthcare professional needs to go from R novice to R guru. By the end of this book, you will be taking a sophisticated approach to health data science with beautiful visualisations, elegant tables, and nuanced analyses. Features Provides an introduction to the fundamentals of R for healthcare professionals Highlights the most popular statistical approaches to health data science Written to be as accessible as possible with minimal mathematics Emphasises the importance of truly understanding the underlying data through the use of plots Includes numerous examples that can be adapted for your own data Helps you create publishable documents and collaborate across teams With this book, you are in safe hands – Prof. Harrison is a clinician and Dr. Pius is a data scientist, bringing 25 years' combined experience of using R at the coal face. This content has been taught to hundreds of individuals from a variety of backgrounds, from rank beginners to experts moving to R from other platforms.