

Applied Linear Regression Models

Deep learning is often viewed as the exclusive domain of math PhDs and big tech companies. But as this hands-on guide demonstrates, programmers comfortable with Python can achieve impressive results in deep learning with little math background, small amounts of data, and minimal code. How? With fastai, the first library to provide a consistent interface to the most frequently used deep learning applications. Authors Jeremy Howard and Sylvain Gugger, the creators of fastai, show you how to train a model on a wide range of tasks using fastai and PyTorch. You'll also dive progressively further into deep learning theory to gain a complete understanding of the algorithms behind the scenes. Train models in computer vision, natural language processing, tabular data, and collaborative filtering Learn the latest deep learning techniques that matter most in practice Improve accuracy, speed, and reliability by understanding how deep learning models work Discover how to turn your models into web applications Implement deep learning algorithms from scratch Consider the ethical implications of your work Gain insight from the foreword by PyTorch cofounder, Soumith Chintala

Applied Linear Statistical Models 5e is the long established leading authoritative text and reference on statistical modeling. For students in most any discipline where statistical analysis or interpretation is used, ALSM serves as the standard work. The text includes brief introductory and review material, and then proceeds through regression and modeling for the first half, and through ANOVA and Experimental Design in the second half. All topics are presented in a precise and clear style supported with solved examples, numbered formulae, graphic illustrations, and "Notes" to provide depth and statistical accuracy and precision. Applications used within the text and the hallmark problems, exercises, and projects are drawn from virtually all disciplines and fields providing motivation for students in virtually any college. The Fifth edition provides an increased use of computing and graphical analysis throughout, without sacrificing concepts or rigor. In general, the 5e uses larger data sets in examples and exercises, and where methods can be automated within software without loss of understanding, it is so done.

For a solid foundation of important statistical methods, the concise, single-source text unites linear regression with analysis of experiments and provides students with the practical understanding needed to apply theory in real data analysis problems. Stressing principles while keeping computational and theoretical details at a manageable level, Applied Regression Analysis and Experimental Design features an emphasis on vector geometry and least squares to unify and provide an intuitive basis for most topics covered... abundant examples and exercises using real-life data sets clearly illustrating practical of data analysis...essential exposure to MINITAB and GENSTAT computer packages , including computer printouts...and important background material such as vector and matrix properties and the distributional properties of quadratic forms. Designed to make theory work for students, this clearly written, easy-to-understand work serves as the ideal texts for courses Regression, Experimental Design, and Linear Models in a broad range of disciplines. Moreover, applied statisticians will find the book a useful reference for the general application of the linear model.

Applied Linear Statistical Models with Student CD

Introduction to Linear Regression Analysis

Applied Linear Regression Models, International Revised Edition with Student CD-ROM

Linear Models in Statistics

With Applications to Linear Models, Logistic Regression, and Survival Analysis

*A step-by-step guide to computing and graphics in regression analysis. In this unique book, leading statisticians Dennis Cook and Sanford Weisberg expertly blend regression fundamentals and cutting-edge graphical techniques. They combine and up-date most of the material from their widely used earlier work, An Introduction to Regression Graphics, and Weisberg's Applied Linear Regression; incorporate the latest in statistical graphics, computing, and regression models; and wind up with a modern, fully integrated approach to one of the most important tools of data analysis. In 23 concise, easy-to-digest chapters, the authors present: A wealth of simple 2D and 3D graphical techniques, helping visualize results through graphs * An improved version of the user-friendly Arc software, which lets readers promptly implement new ideas * Complete coverage of regression models, including logistic regression and generalized linear models * More than 300 figures, easily reproducible on the computer * Numerous examples and problems based on real data * A companion Web site featuring free software and advice, available at www.wiley.com/iamthem atics Accessible, self-contained, and fully referenced, Applied Regression Including Computing and Graphics assumes only a first course in basic statistical methods and provides a bona fide user manual for the Arc software. It is an invaluable resource for anyone interested in learning how to analyze regression problems with confidence and depth.*

Praise for the First Edition "The attention to detail is impressive. The book is very wellwritten and the author is extremely careful with his descriptions . . . the examples are wonderful." —The AmericanStatistician Fully revised to reflect the latest methodologies and emergingapplications, Applied Regression Modeling, Second Editioncontinues to highlight the benefits of statistical methods,specifically regression analysis and modeling, for understanding,analyzing, and interpreting multivariate data in business, scienceand social science applications. The author utilizes a bounty of real-life examples, case studies, illustrations, and graphics to introduce readers to theworld of regression analysis using various software packages,including R, SPSS, Minitab, SAS, JMP, and S-PLUS. In a clear andcareful writing style, the book introduces modeling extensions thatillustrate more advanced regression techniques, including logisticregression, Poisson regression, discrete choice models, multilevelmodels, and Bayesian modeling. In addition, the Second Edition features clarificationand expansion of challenging topics, such as: Transformations, indicator variables, and interaction Testing model assumptions Nonconstant variance Autocorrelation Variable selection methods Model building and graphical interpretation Throughout the book, datasets and examples have been updated andadditional problems are included at the end of each chapter,allowing readers to test their comprehension of the presentedmaterial. In addition, a related website features the book'sdataset, presentation slides, detailed statistical softwareinstructions, and learning resources including additional Autocorrelation instructional videos. With an intuitive approach that is not heavy on mathematicaldetail, Applied Regression Modeling, Second Edition is an excellent book for courses on statistical regression analysis atthe upper-undergraduate and graduate level. The book also serves as a valuable resource for professionals and researchers who utilizestatistical methods for decision-making in their everyday work.

This book presents an accessible approach to understanding time series models and their applications. The ideas and methods are illustrated with both real and simulated data sets. A unique feature of this edition is its integration with the R computing environment.

Linear Statistical Models

Student Solutions Manual for use with Applied linear regression models, third edition and Applied linear statistical models, fourth edition

Applied Linear Models with SAS

Applied Regression Analysis and Experimental Design

Time Series Analysis

Applied Linear Statistical Models 5e is the long established leading authoritative text and reference on statistical modeling, analysis of variance, and the design of experiments. For students in most any discipline where statistical analysis or interpretation is used, ALSM serves as the standard work. The text proceeds through linear and nonlinear regression and modeling for the first half, and through ANOVA and Experimental Design in the second half. All topics are presented in a precise and clear style supported with solved examples, numbered formulae, graphic illustrations, and "Comments" to provide depth and statistical accuracy and precision. Applications used within the text and the hallmark problems, exercises, projects, and case studies are drawn from virtually all disciplines and fields providing motivation for students in virtually any college. The Fifth edition provides an increased use of computing and graphical analysis throughout, without sacrificing concepts or rigor. In general, the 5e uses larger data sets in examples and exercises, and the use of automated software without loss of understanding.

Many texts are excellent sources of knowledge about individual statistical tools, but the art of data analysis is about choosing and using multiple tools. Instead of presenting isolated techniques, this text emphasizes problem solving strategies that address the many issues arising when developing multivariable models using real data and not standard textbook examples. It includes imputation methods for dealing with missing data effectively, methods for dealing with nonlinear relationships and for making the estimation of transformations a formal part of the modeling process, methods for dealing with "too many variables to analyze and not enough observations," and powerful model validation techniques based on the bootstrap. This text realistically deals with model uncertainty and its effects on inference to achieve "safe data mining".

The essential introduction to the theory and application of linear models—now in a valuable new edition Since most advanced statistical tools are generalizations of the linear model, it is necessary to first master the linear model in order to move forward to more advanced concepts. The linear model remains the statistical of linear algebra, rather, an introductory statistics course and the familiar algebra are sufficient. Provides many examples using real-world datasets relevant to various academic disciplines. Fully integrates the R software environment in its numerous examples. The book is aimed primarily at advanced undergraduate and graduate students in social, behavioral, health sciences, and related disciplines, taking a first course in linear regression. It could also be used for self-study and would make an excellent reference for any researcher in these fields. The R code and detailed examples provided throughout the book equip the reader with an excellent set of tools for conducting research on numerous social and behavioral phenomena. John P. Hoffmann is a professor of sociology at Brigham Young University where he teaches research methods and applied statistics courses and conducts research on substance use and criminal behavior.

An R Companion to Applied Regression

MP Applied Linear Regression Models- Revised Edition with Student CD

Applied Regression Analysis

Applied Regression Including Computing and Graphics

Applied Regression Modeling

Research in social and behavioral sciences has benefited from linear regression models (LRMs) for decades to identify and understand the associations among a set of explanatory variables and an outcome variable. Linear Regression Models: Applications in R provides you with a comprehensive treatment of these models and indispensable guidance about how to estimate them using the R software environment. After furnishing some background material, the author explains how to estimate simple and multiple LRMs in R, including how to interpret their coefficients and understand their assumptions. Several chapters thoroughly describe these assumptions and explain how to determine whether they are satisfied and how to modify the regression model if they are not. The book also includes chapters on specifying the correct model, adjusting for measurement error, understanding the effects of influential observations, and using the model with multilevel data. The concluding chapter presents an alternative model—logistic regression—designed for binary or two-category outcome variables. The book includes appendices that discuss data management and missing data and provides simulations in R to test model assumptions. Features Furnishes a thorough introduction and detailed information about the linear regression model, including how to understand and interpret its results, test assumptions, and adapt the model when assumptions are not satisfied. Uses numerous graphs in R to illustrate the model's results, assumptions, and other features. Does not assume a background in statistics or linear algebra, rather, an introductory statistics course and the familiar algebra are sufficient. Provides many examples using real-world datasets relevant to various academic disciplines. Fully integrates the R software environment in its numerous examples. The book is aimed primarily at advanced undergraduate and graduate students in social, behavioral, health sciences, and related disciplines, taking a first course in linear regression. It could also be used for self-study and would make an excellent reference for any researcher in these fields. The R code and detailed examples provided throughout the book equip the reader with an excellent set of tools for conducting research on numerous social and behavioral phenomena. John P. Hoffmann is a professor of sociology at Brigham Young University where he teaches research methods and applied statistics courses and conducts research on substance use and criminal behavior.

Applied Linear Regression ModelsIrwin/McGraw-Hill

Applied Linear Regression Models was listed in the newsletter of the Decision Sciences Institute as a classic in its field and a text that should be on every member's shelf. The third edition continues this tradition. It is a successful blend of theory and application. The authors have taken an applied approach, and emphasize content concepts; this text demonstrates their approach through worked-out examples. Sufficient theory is provided so that applications of regression analysis can be carried out with understanding. John Neter is past president of the Decision Science Institute, and Michael Kutner is a top statistician in the health and life sciences area. Applied Linear Regression Models should be sold into the one-term course that focuses on regression models and applications. This is likely to be required for undergraduate and graduate students majoring in allied health, business, economics, and life sciences.

Regression, Analysis of Variance, and Experimental Designs

Data Analysis Using Regression and Multilevel/Hierarchical Models

Solutions Manual to Accompany Applied Linear Regression Models

Regression For Health and Social Science

Beyond Multiple Linear Regression

Praise for the Third Edition "...this is an excellent book which could easily be used as a course text..." —International Statistical Institute The Fourth Edition of Applied LinearRegression provides a thorough update of the basic theoryand methodology of linear regression modeling. Demonstrating thepractical applications of linear regression analysis techniques,the Fourth Edition uses interesting, real-worldexamples and examples. Stressing central concepts such as model building, understandingparameters, assessing fit and reliability, and drawing conclusions,the new edition illustrates how to develop estimation, confidence, and testing procedures primarily through the use of least squaresregression. While maintaining the accessible appeal of eachprevious edition,Applied Linear Regression, FourthEdition features: Graphical methods stressed in the initial exploratory phase,analysis phase, and summarization phase of an analysis In-depth coverage of parameter estimates in both simple andcomplex models, transformations, and regression diagnostics Newly added material on topics including testing, ANOVA, andvariance assumptions Updated methodology, such as bootstrapping, cross-validationbinomial and Poisson regression, and modern model selectionmethods Applied Linear Regression, Fourth Edition is an excellent textbook for upper-undergraduate and graduate-levelstudents, as well as an appropriate reference guide forpractitioners and applied statisticians in engineering, businessadministration, economics, and the social sciences.

Least squares estimation, when used appropriately, is a powerful research tool. A deeper understanding of the regression concepts is essential for achieving optimal benefits from a least squares analysis. This book builds on the fundamentals of statistical methods and provides appropriate concepts that will allow a scientist to use least squares as an effective research tool. Applied Regression Analysis is aimed at the scientist who wishes to gain a working knowledge of regression analysis. The basic purpose of this book is to develop an understanding of least squares and related statistical methods without becoming excessively mathematical. It is the outgrowth of more than 30 years of consulting experience with scientists and many years of teaching an applied regression course to graduate students. Applied Regression Analysis serves as an excellent text for a service course on regression for non-statisticians and as a reference for researchers. It also provides a bridge between a two-semester introduction to statistical methods and a theoretical linear models course. Applied Regression Analysis emphasizes the concepts and the analysis of data sets. It provides a review of the key concepts in simple linear regression, matrix operations, and multiple regression. Methods and criteria for selecting regression variables and geometric interpretations are discussed. Polynomial, trigonometric, analysis of variance, nonlinear, time series, logistic, random effects, and mixed effects models are also discussed. Detailed case studies and exercises based on real data sets are used to reinforce the concepts. The data sets used in the book are available on the Internet.

Kutner, Nachtsheim, Neter, Wasserman, Applied Linear Regression Models, 4/e (ALRM4e) is the long established leading authoritative text and reference on regression (previously Neter was lead author.) For students in most any discipline where statistical analysis or interpretation is used, ALRM has served as the industry standard. The text includes brief introductory and review material, and then proceeds through regression and modeling. All topics are presented in a precise and clear style supported with solved examples, numbered formulae, graphic illustrations, and "Comments" to provide depth and statistical accuracy and precision. Applications used within the text and the hallmark problems, exercises, and projects are drawn from virtually all disciplines and fields providing motivation for students in any discipline. ALRM 4e provides an increased use of computing and graphical analysis throughout, without sacrificing concepts or rigor.

Applied Linear Statistical Models

Concepts, Applications, and Implementation

Manual

Applied Statistics

Student Solutions Manual for Use with Applied Linear Regression Models, Third Edition and Applied Linear Statistical Models, Fourth Edition

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)

Praise for the First Edition "This impressive and eminently readable text . . . [is] a welcome addition to the statistical literature." The Indian Journal of Statistics Revised to reflect the current developments on the topic, Linear Statistical Models, Second Edition provides an up-to-date approach to various statistical model concepts. The book includes clear discussions that illustrate key concepts in an accessible and interesting format while incorporating the most modern software applications. This Second Edition follows an introduction to theory;proof;examples format that allows for easier comprehension of how to use the methods and recognize the associated assumptions and limits. In addition to discussions on the methods of random vectors, multiple regression techniques, simultaneous confidence intervals, and analysis of frequency data, new topics such as mixed models and curve fitting of models have been added to thoroughly update and modernize the book. Additional topical coverage includes: An introduction to R and S-Plus® with many examples Multiple comparison procedures Estimation of quantiles for regression models An emphasis on vector spaces and the corresponding geometry Extensive graphical displays accompany the book's updated descriptions and examples, which can be simulated using R, S-Plus®, and SAS® code. Problems at the end of each chapter allow readers to test their understanding of the presented concepts, and additional data sets are available via the book's FTP site. Linear Statistical Models, Second Edition is an excellent book for courses on linear models at the upper-undergraduate and graduate levels. It also serves as a comprehensive reference for statisticians, engineers, and scientists who apply multiple regression or analysis of variance in their everyday work.

This book, first published in 2007, is for the applied researcher performing data analysis using linear and nonlinear regression and multilevel models.

Applied Linear Regression

Linear Regression Models

Applied Linear Statistical Models. Regression, Analysis and Experimental Designs

Instructor Solutions Manual to Accompany Applied Linear Regression Models, Second Edition & Applied Linear Statistical Models, Third Edition

Applied linear statistical models : regression, analysis of variance, and experimental design

Combining a modern, data-analytic perspective with a focus on applications in the social sciences, the Third Edition of Applied Regression Analysis and Generalized Linear Models provides in-depth coverage of regression analysis, generalized linear models, and closely related methods, such as bootstrapping and missing data. Updated throughout, this Third Edition includes new chapters on mixed-effects models for hierarchical and longitudinal data. Although the text is largely accessible to readers with a modest background in statistics and mathematics, author John Fox also presents more advanced material in optional sections and chapters throughout the book. Available with Perusal—an eBook that makes it easier to prepare for class Perusal is an award-winning eBook platform featu emphasis on teaching students and instructors to collaboratively mark up and discuss their SAGE textbook. Backed by research and supported by technological innovations developed at Harvard University, this process of learning through collaborative annotation keeps your students engaged and makes teaching easier and more effective. Learn more. Kutner, Neter, Nachtsheim, Wasserman, Applied Linear Regression Models, 4/e (ALRM4e) is the long established leading authoritative text and reference on regression (previously Neter was lead author.) For students in most any discipline where statistical analysis or interpretation is used, ALRM has served as the industry standard. The text includes brief introductory and review material, and the proceeds through regression and modeling. All topics are presented in a precise and clear style supported with solved examples, numbered formulae, graphic illustrations, and "Notes" to provide depth and statistical accuracy and precision. Applications used within the text and the hallmark problems, exercises, and projects are drawn from virtually all disciplines and fields providing motivation for students in any discipline. ALRM 4e provides an increased use of computing and graphical analysis throughout, without sacrificing concepts or rigor by using larger data sets in examples and exercises, and where methods can be automated within software without loss of understanding, it is so done.

An R Companion to Applied Regression is a broad introduction to the R statistical computing environment in the context of applied regression analysis. John Fox and Sanford Weisberg provide a step-by-step guide to using the free statistical software R, an emphasis on integrating statistical computing in R with the practice of data analysis, coverage of generalized linear models, and substantial R-based support materials. The Third Edition has been reorganized and includes a new chapter on mixed-effects models, new and updated data sets, and a de-emphasis on statistical programming, while retaining a general introduction to basic R programming. The authors have substantially updated both the car and effects packages for R for this edition, introducing additional capabilities and making the software more consistent and easier to use. They also advocate an everyday data-analysis workflow that encourages reproducible research. To this end, they provide coverage of RStudio, an interactive development environment for R that allows readers to organize and document their work in a simple and intuitive fashion, and then easily share their results with others. Also included is coverage of R Markdown, showing how to create documents that mix R commands with explanatory text.

Applied Generalized Linear Models And Multilevel Models in R

Regression Analysis and Linear Models

Applied Linear Statistical Models Regression, Analysis of Variance, and Experimentsl Designs

Deep Learning for Coders with fastai and PyTorch

Some basic results in probability and statistics. Basic regression analysis. General regression and correlation analysis. Basic analysis of variance. Multifactor analysis of variance. Experimental designs.

This textbook for students in the health and social sciences covers the basics of linear model methods with a minimum of mathematics, assuming only a pre-calculus background. Numerous examples drawn from the news and current events with an emphasis on health issues, illustrate the concepts in an immediately accessible way. Methods covered include linear regression models, Poisson regression, logistic regression, proportional hazards regression, survival analysis, and nonparametric regression. The author emphasizes interpretation of computer output in terms of the motivating example. All of the R code is provided and carefully explained, allowing readers to quickly apply the methods to their own data. Plenty of exercises help students think about the issues involved in the analysis and its interpretation. Code and datasets are available for download from the book's website at www.cambridge.org/zelterman

An outstanding introduction to the fundamentals of regression analysis—updated and expanded The methods of regression analysis are the most widely used statistical tools for discovering the relationships among variables. This classic text, with its emphasis on clear, thorough presentation of concepts and applications, offers a complete, easily accessible introduction to the fundamentals of regression analysis. Assuming only a basic knowledge of elementary statistics, Applied Regression Analysis, Third Edition focuses on the fitting and checking of both linear and nonlinear regression models, using small and large data sets, with pocket calculators or computers. This Third Edition features separate chapters on multicollinearity, generalized linear models, mixture ingredients, geometry of regression, robust regression, and resampling procedures. Extensive support materials include sets of carefully designed exercises with full or partial solutions and a series of true/false questions with answers. All data sets used in both the text and the exercises can be found on the companion disk at the back of the book. For analysts, researchers, and students in university, industrial, and government courses on regression, this text is an excellent introduction to the subject and an efficient means of learning how to use a valuable analytical tool. It will also prove an invaluable reference resource for applied scientists and statisticians.

Applied Linear Regression Models

A Research Tool

Applied Linear Regression Models 5e

Applications in R

Applied Regression Analysis and Generalized Linear Models

This textbook for a second course in basic statistics for undergraduates or first-year graduate students introduces linear regression models and describes other linear models including Poisson regression, logistic regression, proportional hazards regression, and nonparametric regression. Numerous examples drawn from the news and current events with an emphasis on health issues illustrate these concepts. Assuming only a pre-calculus background, the author keeps equations to a minimum and demonstrates all computations using SAS. Most of the programs and output are displayed in a self-contained way, with an emphasis on the interpretation of the output in terms of how it relates to the motivating example. Plenty of exercises conclude every chapter. All of the datasets and SAS programs are available from the book's website, along with other ancillary material.

Emphasizing conceptual understanding over mathematics, this user-friendly text introduces linear regression analysis to students and researchers across the social, behavioral, consumer, and health sciences. Coverage includes model construction and estimation, quantification and measurement of multivariate and partial associations, statistical control, group comparisons, moderation analysis, mediation and path analysis, and regression diagnostics, among other important topics. Engaging worked-through examples demonstrate each technique, accompanied by helpful advice and cautions. The use of SPSS, SAS, and STATA is emphasized, with an appendix on regression analysis using R. The companion website (www.ahayes.com) provides datasets for the book's examples as well as the RLM macro for SPSS and SAS. Pedagogical Features: *Chapters include SPSS, SAS, or STATA code pertinent to the analyses described, with each distinctively formatted for easy identification. *An appendix documents the RLM macro, which facilitates computations for estimating and probing interactions, dominance analysis, heteroscedasticity-consistent standard errors, and linear spline regression, among other analyses. *Students are guided to practice what they learn in each chapter using datasets provided online. *Addresses topics not usually covered, such as ways to measure a variable's importance, coding systems for representing categorical variables, causation, and myths about testing interaction.

Praise for the Fourth Edition "As with previous editions, the authors have produced a leading textbook on regression." —Journal of the American Statistical Association A comprehensive and up-to-date introduction to the fundamentals of regression analysis Introduction to Linear Regression Analysis, Fifth Edition continues to present both the conventional and less common uses of linear regression in today's cutting-edge scientific research. The authors blend both theory and application to equip readers with an understanding of the basic principles needed to apply regression model-building techniques in various fields of study, including engineering, management, and the health sciences. Following a general introduction to regression modeling, including typical applications, a host of technical tools are outlined such as basic inference procedures, introductory aspects of model adequacy checking, and polynomial regression models and their variations. The book then discusses how transformations and weighted least squares can be used to resolve problems of model inadequacy and also how to deal with influential observations. The Fifth Edition features numerous newly added topics, including: A chapter on regression analysis of time series data that presents the Durbin-Watson test and other techniques for detecting autocorrelation as well as parameter estimation in time series regression models Regression models with random effects in addition to a discussion on subsampling and the importance of the mixed model Tests on individual regression coefficients and subsets of coefficients Examples of current uses of simple linear regression models and the use of multiple regression models for understanding patient satisfaction data. In addition to Minitab, SAS, and S-PLUS, the authors have incorporated JMP and the freely available R software to illustrate the discussed techniques and procedures in this new edition. Numerous exercises have been added throughout, allowing readers to test their understanding of the material. Introduction to Linear Regression Analysis, Fifth Edition is an excellent book for statistics and engineering courses on regression at the upper-undergraduate and graduate levels. The book also serves as a valuable, robust resource for professionals in the fields of engineering, life and biological sciences, and the social sciences.

Regression Modeling Strategies

Applied Linear Models with R

With Applications in R

Student Solutions Manual for Applied Linear Regression Models