

Basic Statistics

A core statistics text that emphasizes logical inquiry, notmath Basic Statistics for Social Research teaches core generalstatistical concepts and methods that all social science majorsmust master to understand (and do) social research. Its use ofmathematics and theory are deliberately limited, as the authorsfocus on the use of concepts and tools of statistics in theanalysis of social science data, rather than on the mathematicaland computational aspects. Research questions and applications aretaken from a wide variety of subfields in sociology, and eachchapter is organized around one or more general ideas that areexplained at its beginning and then applied in increasing detail into the body of the text. Each chapter contains instructive features to aid students inunderstanding and mastering the various statistical approachespresented in the book, including: Learning objectives Check quizzes after many sections and an answer key at the endof the chapter Summary Key terms End-of-chapter exercises SPSS exercises (in select chapters) Ancillary materials for both the student and the instructor areavailable and include a test bank for instructors and downloadablevideo tutorials for students.

Statistical methods are a key part of of data science, yet very few data scientists have any formal statistics training. Courses and books on basic statistics rarely cover the topic from a data science perspective. This practical guide explains how to apply various statistical methods to data science, tells you how to avoid their misuse, and gives you advice on what's important and what's not. Many data science resources incorporate statistical methods but lack a deeper statistical perspective. If you ' re familiar with the R programming language, and have some exposure to statistics, this quick reference bridges the gap in an accessible, readable format. With this book, you ' ll learn: Why exploratory data analysis is a key preliminary step in data science How random sampling can reduce bias and yield a higher quality dataset, even with big data How the principles of experimental design yield definitive answers to questions How to use regression to estimate outcomes and detect anomalies Key classification techniques for predicting which categories a record belongs to Statistical machine learning methods that “ learn ” from data Unsupervised learning methods for extracting meaning from unlabeled data

A condensed and more streamlined version of the very popular and widely used UNDERSTANDABLE STATISTICS, Ninth Edition, this book offers users an effective way to teach the essentials of statistics, including early coverage of Regression, within a more limited time frame. Designed to help users overcome their apprehension about statistics, UNDERSTANDING BASIC STATISTICS, Fifth Edition, is a thorough yet approachable book that provides plenty of guidance and informal advice demonstrating the links between statistics and the world. The strengths of the book include an applied approach that helps users realize the real-world significance of statistics, an accessible exposition, and a new, complete technology package. The Fifth Edition addresses the growing importance of developing students' critical thinking and statistical literacy skills with the introduction of new features and exercises throughout the text. The use of the graphing calculator, Microsoft? Excel?, Minitab?, and SPSS is covered but not required.

An Introduction with R

Essential Statistics, Regression, and Econometrics

An Introduction to Basic Statistical Concepts and Analysis

Fundamental Concepts and Procedures of Data Analysis

Basic Statistics and Epidemiology

Online Statistics: An Interactive Multimedia Course of Study is a resource for learning and teaching introductory statistics. It contains material presented in textbook format and as video presentations. This resource features interactive demonstrations and simulations, case studies, and an analysis lab.This print edition of the public domain textbook gives the student an opportunity to own a physical copy to help enhance their educational experience. This part I features the book Front Matter, Chapters 1-10, and the full Glossary. Chapters Include: I. Introduction, II. Graphing Distributions, III. Summarizing Distributions, IV. Describing Bivariate Data, V. Probability, VI. Research Design, VII. Normal Distributions, VIII. Advanced Graphs, IX. Sampling Distributions, and X. Estimation. Online Statistics Education: A Multimedia Course of Study (http://onlinestatbook.com/). Project Leader: David M. Lane, Rice University.

Statistical Inference via Data Science: A ModernDive into R and the Tidyverse provides a pathway for learning about statistical inference using data science tools widely used in industry, academia, and government. It introduces the tidyverse suite of R packages, including the ggplot2 package for data visualization, and the dplyr package for data wrangling. After equipping readers with just enough of these data science tools to perform effective exploratory data analyses, the book covers traditional introductory statistics topics like confidence intervals, hypothesis testing, and multiple regression modeling, while focusing on visualization throughout. Features: ? Assumes minimal prerequisites, notably, no prior calculus nor coding experience ? Motivates theory using real-world data, including all domestic flights leaving New York City in 2013, the Gampinder project, and the data journalism website, FiveThirtyEight.com ? Centers on simulation-based approaches to statistical inference rather than mathematical formulas ? Uses the infer package for “tidy” and transparent statistical inference to construct confidence intervals and conduct hypothesis tests via the bootstrap and permutation methods ? Provides all code and output embedded directly in the text; also available in the online version at moderndrive.com This book is intended for individuals who would like to simultaneously start developing their data science toolbox and start learning about the inferential and modeling tools used in much of modern-day research. The book can be used in methods and data science courses and first courses in statistics, at both the undergraduate and graduate levels.

Using a truly accessible and reader-friendly approach, Introduction to Statistics: Fundamental Concepts and Procedures of Data Analysis, by Howard M. Reid, redefines the way statistics can be taught and learned. Unlike other books that merely focus on procedures, Reid’s approach balances development of critical thinking skills with application of those skills to contemporary statistical analysis. He goes beyond simply presenting techniques by focusing on the key concepts readers need to master in order to ensure their long-term success. Indeed, this exciting new book offers the perfect foundation upon which readers can build as their studies and careers progress to more advanced forms of statistics. Keeping computational challenges to a minimum, Reid shows readers not only how to conduct a variety of commonly used statistical procedures, but also when each procedure should be utilized and how they are related. Following a review of descriptive statistics, he begins his discussion of inferential statistics with a two-chapter examination of the Chi Square test to introduce students to hypothesis testing, the importance of determining effect size, and the need for post hoc tests. When more complex procedures related to interval/ratio data are covered, students already have a solid understanding of the foundational concepts involved. Exploring challenging topics in an engaging and easy-to-follow manner, Reid builds concepts logically and supports learning through robust pedagogical tools, the use of SPSS, numerous examples, historical quotations, insightful questions, and helpful progress checks.

with Applications in R

50 Essential Concepts

Statistical Inference via Data Science: A ModernDive into R and the Tidyverse

Step-by-step Calculations and Computer Techniques Using Minitab

A Textbook of Basic Statistics

An Introduction to Statistical Learning provides an accessible overview of the field of statistical learning, an essential toolset for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. This book presents some of the most important modeling and prediction techniques, along with relevant applications. Topics include linear regression, classification, resampling methods, shrinkage approaches, tree-based methods, support vector machines, clustering, and more. Color graphics and real-world examples are used to illustrate the methods presented. Since the goal of this textbook is to facilitate the use of these statistical learning techniques by practitioners in science, industry, and other fields, each chapter contains a tutorial on implementing the analyses and methods presented in R, an extremely popular open source statistical software platform. Two of the authors co-wrote The Elements of Statistical Learning (Hastie, Tibshirani and Friedman, 2nd edition 2009), a popular reference book for statistics and machine learning researchers.

An Introduction to Statistical Learning covers many of the same topics, but at a level accessible to a much broader audience. This book is targeted at statisticians and non-statisticians alike who wish to use cutting-edge statistical learning techniques to analyze their data. The text assumes only a previous course in linear regression and no knowledge of matrix algebra.

A clear and concise introduction and reference for anyone new to the subject of statistics.

Basic Statistics Covers A Wide Range Of Statistical Theory Taught In Almost All Faculties. Theory Followed By Relevant Formulae Is Fully Explicated Through Solved Numerical Problems. Mathematical Derivations And Proofs Of The Formulae Are Largely Absent. The Book Presupposes No Advance Knowledge Of Mathematics.Basic Statistics Fully Covers The Syllabi Of Statistics Courses Running In Various Universities In The Faculties Of Commerce, Arts, Master Of Business Management, Agriculture, Home Science, Pharmacy, And For Students Appearing In C.A. (P.E.-I), I.C.W.A. (Inter.), Etc. This Book Provides Exhaustive Matter In A Simple, Lucid And Exact Manner For Inquisitive Minds.Fourth Edition Of Basic Statistics Is Fully Revised And Enlarged. The Addition Of Two Chapters Entitled Research Processes And Experimental Research Designs Has Made The Book Complete In Its Own Sense. Variety Of Large Number Of Theory And Numerical Questions At The End Of Each Chapter Is A Boon To Achieve One S Own Goal. A Reader Will Find The Book Very Useful And Better Than His Expectations.

Reaching Decisions with Data

A Primer for the Biomedical Sciences

A Program for Self-instruction

Basic Statistics

Interpreting Basic Statistics

Interpreting Basic Statistics gives students valuable practice in interpreting statistical reporting as it actually appears in peer-reviewed journals. New to the eighth edition: A broader array of basic statistical concepts is covered, especially to better reflect the New Statistics. Journal excerpts have been updated to reflect current styles in statistical reporting. A stronger emphasis on data visualizations has been added. The statistical exercises have been re-organized into units to facilitate ease of use and understanding. About this book Each of the 64 exercises gives a brief excerpt of statistical reporting from a published research article, and begins with guidelines for interpreting the statistics in the excerpt. The questions on the excerpts promote learning by requiring students to interpret information in tables and figures, perform simple calculations to further their interpretations, critique data-reporting techniques, and evaluate procedures used to collect data. Each exercise covers a limited number of statistics, making it easy to coordinate the exercises with lectures and a main textbook. The questions in each exercise are divided into two parts: (1) Factual Questions and (2) Questions for Discussion. The factual questions require careful reading for details, while the discussion questions show that interpreting statistics is more than a mathematical exercise. These questions require students to apply good judgment as well as statistical reasoning in arriving at appropriate interpretations.

A friendly and accessible approach to applying statistics in the real world With an emphasis on critical thinking, The Art of Data Analysis: How to Answer Almost Any Question Using Basic Statistics presents fun and unique examples, guides readers through the entire data collection and analysis process, and introduces basic statistical concepts along the way. Leaving proofs and complicated mathematics behind, the author portrays the more engaging side of statistics and emphasizes its role as a problem-solving tool. In addition, light-hearted case studies illustrate the application of statistics to real data analyses, highlighting the strengths and weaknesses of commonly used techniques. Written for the growing academic and industrial population that uses statistics in everyday life, The Art of Data Analysis: How to Answer Almost Any Question Using Basic Statistics highlights important issues that often arise when collecting and sifting through data. Featured concepts include: • Descriptive statistics • Analysis of variance • Probability and sample distributions • Confidence intervals • Hypothesis tests • Regression • Statistical correlation • Data collection • Statistical analysis with graphs Fun and inviting from beginning to end, The Art of Data Analysis is an ideal book for students as well as managers and researchers in industry, medicine, or government who face statistical questions and are in need of an intuitive understanding of basic statistical reasoning.

A guide in basic statistics emphasises its practical use in epidemiology and public health, providing understanding of topics such as study design, data analysis and statistical methods used in the execution of medical research. This title includes sections on Correlation and Linear Regression, as well as exercises reflecting working life.

Basic Statistics for Social Research

Basic Statistics with R

Essential Statistics, Fourth Edition

Statistical Methods

Practical Statistics for Data Scientists

This straightforward primer in basic statistics emphasizes its practical use in epidemiology and public health, providing understanding of essential topics such as study design, data analysis and statistical methods used in the execution of medical research. This new edition is substantially revised and includes entirely new material on statistical power and sample size. Clearly worded and assuming no prior knowledge, it gives full step-by-step guidance on performing statistical calculations. It contains numerous examples and exercises with detailed answers to help readers grasp the main point.

An introductory text for students taking a first course in statistics-in fields as diverse as engineering, business, chemistry, and biology-Essential Statistics: Fourth Edition thoroughly updates and enhances the hugely successful third edition. It presents new information on modern statistical techniques such as Analysis of Variance (ANOVA), and software such as MINITABTM for WINDOWS. An experienced former lecturer, the author communicates to students in his trademark easy-to-follow style. Keeping complex mathematical theory to a minimum, Rees presents a wealth of fully explained worked examples throughout the text. In addition, the end-of-chapter Worksheets relate to a variety of fields-enabling students to see the relevance of the numerous methods to their study areas. Essential Statistics: Fourth Edition emphasizes the principles and assumptions underlying the statistical methods, thus providing the tools needed for students to use and interpret statistical data effectively.

Basic Statistics for Social Workers covers descriptive and inferential statistics at an introductory level. Using examples from social work, the text covers single-subject analysis, as well as multiple regression. The mathematics is presented in a simple user-friendly manner.

An Interactive Multimedia Course of Study (Part I: Chapters 1-10)

The Basic Practice of Statistics

Basic Statistics for Educational Research

Introduction to Statistics

Basic Statistics for the Behavioral Sciences

Statistical Methods: An Introduction to Basic Statistical Concepts and Analysis, Second Edition is a textbook designed for students with no prior training in statistics. It provides a solid background of the core statistical concepts taught in most introductory statistics textbooks. Mathematical proofs are deemphasized in favor of careful explanations of statistical constructs. The text begins with coverage of descriptive statistics such as measures of central tendency and variability, then moves on to inferential statistics. Transitional chapters on z-scores, probability, and sampling distributions pave the way to understanding the logic of hypothesis testing and the inferential tests that follow. Hypothesis testing is taught through a four-step process. These same four steps are used throughout the text for the other statistical tests presented including t tests, one- and two-way ANOVAs, chi-square, and correlation. A chapter on nonparametric tests is also provided as an alternative when the requirements cannot be met for parametric tests. Because the same logical framework and sequential steps are used throughout the text, a consistency is provided that allows students to gradually master the concepts. Their learning is enhanced further with the inclusion of "thought questions" and practice problems integrated throughout the chapters. New to the second edition: Chapters on factorial analysis of variance and non-parametric techniques for all data Additional and updated chapter exercises for students to test and demonstrate their learning Full instructor resources: test bank questions, Powerpoint slides, and an Instructor Manual

Features basic statistical concepts as a tool for thinking critically, wading through large quantities of information, and answering practical, everyday questions Written in an engaging and inviting manner, Beyond Basic Statistics: Tips, Tricks, and Techniques Every Data Analyst Should Know presents the more subjective side of statistics—the art of data analytics. Each chapter explores a different question using fun, common sense examples that illustrate the concepts, methods, and applications of statistical techniques. Without going into the specifics of theorems, propositions, or formulas, the book effectively demonstrates statistics as a useful problem-solving tool. In addition, the author demonstrates how statistics is a tool for thinking critically, wading through large volumes of information, and answering life ' s important questions. Beyond Basic Statistics: Tips, Tricks, and Techniques Every Data Analyst Should Know also features: Plentiful examples throughout aimed to strengthen readers ' understanding of the statistical concepts and methods A step-by-step approach to elementary statistical topics such as sampling, hypothesis tests, outlier detection, normality tests, robust statistics, and multiple regression A case study in each chapter that illustrates the use of the presented techniques Highlights of well-known shortcomings that can lead to false conclusions An introduction to advanced techniques such as validation and bootstrapping Featuring examples that are engaging and non-application specific, the book appeals to a broad audience of students and professionals alike, specifically students of undergraduate statistics, managers, medical professionals, and anyone who has to make decisions based on raw data or compiled results.

Basic Statistics provides an accessible and comprehensive introduction to statistics using the free, state-of-the-art, powerful software program R. This book is designed to both introduce students to key concepts in statistics and to provide simple instructions for using R. This concise book: -Teaches essential concepts in statistics, assuming little background knowledge on the part of the reader -Introduces students to R with as few sub-commands as possible for ease of use -Provides practical examples from the educational, behavioral, and social sciences With clear explanations of statistical processes and step-by-step commands in R, Basic Statistics will appeal to students and professionals across the social and behavioral sciences.

A Workbook Based on Excerpts from Journal Articles

Tools for Continuous Improvement

Introductory Statistics

Basic Statistics for Social Workers

Understanding and Applying Basic Statistical Methods Using R

Basic Statistics provides an accessible and comprehensive introduction to statistics using the free, state-of-the-art software program R. This book is designed to both introduce students to key concepts in statistics and to provide simple instructions for using the powerful software program R.

Interpreting Basic Statistics gives students valuable practice in interpreting statistical reporting as it actually appears in peer-reviewed journals. Features of the ninth edition: Covers a broad array of basic statistical concepts, including topics drawn from the New Statistics Up-to-date journal excerpts reflecting contemporary styles in statistical reporting Strong emphasis on data visualization Ancillary materials include data sets with almost two hours of accompanying tutorial videos, which will help students and instructors apply lessons from the book to real life scenarios About this book Each of the 63 exercises in the book contain three central components: 1) an introduction to a statistical concept, 2) a brief excerpt from a published research article that uses the statistical concept, and 3) a set of questions (with answers) that guides students into deeper learning about the concept. The questions on the journal excerpts promote learning by helping students interpret information in tables and figures, perform simple calculations to further their interpretations, critique data-reporting techniques, and evaluate procedures used to collect data. The questions in each exercise are divided into two parts: (1) Factual Questions and (2) Questions for Discussion. The factual questions require careful reading for details,

while the discussion questions show that interpreting statistics is more than a mathematical exercise. These questions require students to apply good judgment as well as statistical reasoning in arriving at appropriate interpretations. Each exercise covers a limited number of topics, making it easy to coordinate the exercises with lectures or a traditional statistics textbook.

This is an beginning book on statistics and research. It could be used by undergraduate students and graduate students alike. The book covers several methods of research including correlational and experimental methods. Rudiments of descriptive statistics and inferential statistics are also presented.

An Introduction to Statistical Learning

Preparation for Basic Statistics

Basic Statistics for the Health Sciences

Understanding Basic Statistics

BASIC STATISTICS (Penerbit UMK)

Both students and professionals are increasingly reliant on computers for the analysis of data. This accessible introduction to statistics using the program Minitab assumes no prior knowledge of statistics or computing, and has details of the different versions and options available. It also explains when to apply and how to calculate and interpret a wide range of statistical procedures commonly used in the social sciences. Ranging from chi-square and the t test to analysis of covariance and multiple regression, Duncan Cramer covers a wide choice of statistics, including tests not found in other introductory texts, such as tests for determining whether correlations differ and the extent of agreement between observers. Important statistical points are illustrated with worked numerical examples, and exercises are provided at the end of chapters.

New Edition of a Classic Guide to Statistical Applications in the Biomedical Sciences In the last decade, there have been significant changes in the way statistics is incorporated into biostatistical, medical, and public health research. Addressing the need for a modernized treatment of these statistical applications, Basic Statistics, Fourth Edition presents relevant, up-to-date coverage of research methodology using careful explanations of basic statistics and how they are used to address practical problems that arise in the medical and public health settings. Through concise and easy-to-follow presentations, readers will learn to interpret and examine data by applying common statistical tools, such as sampling, random assignment, and survival analysis. Continuing the tradition of its predecessor, this new edition outlines a thorough discussion of different kinds of studies and guides readers through the important, related decision-making processes such as determining what information is needed and planning the collections process. The book equips readers with the knowledge to carry out these practices by explaining the various types of studies that are commonly conducted in the fields of medical and public health, and how the level of evidence varies depending on the area of research. Data screening and data entry into statistical programs is explained and accompanied by illustrations of statistical analyses and graphs. Additional features of the Fourth Edition include: A new chapter on data collection that outlines the initial steps in planning biomedical and public health studies A new chapter on nonparametric statistics that includes a discussion and application of the Sign test, the Wilcoxon Signed Rank test, and the Wilcoxon Rank Sum test and its relationship to the Mann-Whitney U test An updated introduction to survival analysis that includes the Kaplan Meier method for graphing the survival function and a brief introduction to tests for comparing survival functions Incorporation of modern statistical software, such as SAS, Stata, SPSS, and Minitab into the presented discussion of data analysis Updated references at the end of each chapter Basic Statistics, Fourth Edition is an ideal book for courses on biostatistics, medicine, and public health at the upper-undergraduate and graduate levels. It is also appropriate as a reference for researchers and practitioners who would like to refresh their fundamental understanding of statistical techniques.

Basic Statistics with R: Reaching Decisions with Data provides an understanding of the processes at work in using data for results. Sections cover data collection and discuss exploratory analyses, including visual graphs, numerical summaries, and relationships between variables - basic probability, and statistical inference - including hypothesis testing and confidence intervals. All topics are taught using real-data drawn from various fields, including economics, biology, political science and sports. Using this wide variety of motivating examples allows students to directly connect and make statistics essential to their field of interest, rather than seeing it as a separate and ancillary knowledge area. In addition to introducing students to statistical topics using real data, the book provides a gentle introduction to coding, having the students use the statistical language and software R. Students learn to load data, calculate summary statistics, create graphs and do statistical inference using R with either Windows or Macintosh machines. Features real-data to give students an engaging practice to connect with their areas of interest Evolves from basic problems that can be worked by hand to the elementary use of opensource R software Offers a direct, clear approach highlighted by useful visuals and examples

Second Edition

Tips, Tricks, and Techniques Every Data Analyst Should Know

Online Statistics Education

Statistics in a Nutshell

A Practical Guide

Packed with real-world illustrations and the latest data available, BASIC STATISTICS FOR THE BEHAVIORAL SCIENCES, 7e demystifies and fully explains statistics in a lively, reader-friendly format. The author's clear, patiently crafted explanations with an occasional touch of humor, teach readers not only how to compute an answer but also why they should perform the procedure or what their answer reveals about the data. Offering a conceptual-intuitive approach, this popular book presents statistics within an understandable research context, deals directly and positively with potential weaknesses in mathematics, and introduces new terms and concepts in an integrated way. Available with InfoTrac Student Collections <http://goengage.com/infotrac>. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Introductory Statistics is designed for the one-semester, introduction to statistics course and is geared toward students majoring in fields other than math or engineering. This text assumes students have been exposed to intermediate algebra, and it focuses on the applications of statistical knowledge rather than the theory behind it. The foundation of this textbook is Collaborative Statistics, by Barbara Illowsky and Susan Dean. Additional topics, examples, and ample opportunities for practice have been added to each chapter. The development choices for this textbook were made with the guidance of many faculty members who are deeply involved in teaching this course. These choices led to innovations in art, terminology, and practical applications, all with a goal of increasing relevance and accessibility for students. We strove to make the discipline meaningful, so that students can draw from it a working knowledge that will enrich their future studies and help them make sense of the world around them. Coverage and Scope Chapter 1 Sampling and Data Chapter 2 Descriptive Statistics Chapter 3 Probability Topics Chapter 4 Discrete Random Variables Chapter 5 Continuous Random Variables Chapter 6 The Normal Distribution Chapter 7 The Central Limit Theorem Chapter 8 Confidence Intervals Chapter 9 Hypothesis Testing with One Sample Chapter 10 Hypothesis Testing with Two Samples Chapter 11 The Chi-Square Distribution Chapter 12 Linear Regression and Correlation Chapter 13 F Distribution and One-Way ANOVA

This is a clear and innovative overview of statistics which emphasises major ideas, essential skills and real-life data. The organisation and design has been improved for the fifth edition, coverage of engaging, real-world topics has been increased and content has been updated to appeal to today's trends and research.

The Art of Data Analysis

How to Answer Almost Any Question Using Basic Statistics

Beyond Basic Statistics

Essential Statistics, Regression, and Econometrics, Second Edition, is innovative in its focus on preparing students for regression/econometrics, and in its extended emphasis on statistical reasoning, real data, pitfalls in data analysis, and modeling issues. This book is uncommonly approachable and easy to use, with extensive word problems that emphasize intuition and understanding. Too many students mistakenly believe that statistics courses are too abstract, mathematical, and tedious to be useful or interesting. To demonstrate the power, elegance, and even beauty of statistical reasoning, this book provides hundreds of new and updated interesting and relevant examples, and discusses not only the uses but also the abuses of statistics. The examples are drawn from many areas to show that statistical reasoning is not an irrelevant abstraction, but an important part of everyday life. Includes hundreds of updated and new, real-world examples to engage students in the meaning and impact of statistics Focuses on essential information to enable students to develop their own statistical reasoning Ideal for one-quarter or one-semester courses taught in economics, business, finance, politics, sociology, and psychology departments, as well as in law and medical schools Accompanied by an ancillary website with an instructors solutions manual, student solutions manual and supplementing chapters

This book introduces statistics which comprise of descriptive statistics and inferential statistics. This book encompasses the data collection and presentation, central tendency measurement such as mean, median, mode and measures of dispersion. It also includes probability theory, probability distribution, discrete probability distribution and continuous probability distribution. This book also covers statistical tests such as t-test, ANOVA, chi-squared test, and other statistical tests that will be used to test the hypothesis. Topics presented in this book is in line with the syllabus for the basic statistics subject which is taken by all Bachelor in Applied Science students in UMK. Content of this book is also suitable for any other bachelor degree.

Features a straightforward and concise resource for introductory statistical concepts, methods, and techniques using R Understanding and Applying Basic Statistical Methods Using R uniquely bridges the gap between advances in the statistical literature and methods routinely used by non-statisticians. Providing a conceptual basis for understanding the relative merits and applications of these methods, the book features modern insights and advances relevant to basic techniques in terms of dealing with non-normality, outliers, heteroscedasticity (unequal variances), and curvature. Featuring a guide to R, the book uses R programming to explore introductory statistical concepts and standard methods for dealing with known problems associated with classic techniques. Thoroughly class-room tested, the book includes sections that focus on either R programming or computational details to help the reader become acquainted with basic concepts and principles essential in terms of understanding and applying the many methods currently available. Covering relevant material from a wide range of disciplines, Understanding and Applying Basic Statistical Methods Using R also includes: Numerous illustrations and exercises that use data to demonstrate the practical importance of multiple perspectives Discussions on common mistakes such as eliminating outliers and applying standard methods based on means using the remaining data Detailed coverage on R programming with descriptions on how to apply both classic and more modern methods using R A companion website with the data and solutions to all of the exercises Understanding and Applying Basic Statistical Methods Using R is an ideal textbook for an undergraduate and graduate-level statistics courses in the science and/or social science departments. The book can also serve as a reference for professional statisticians and other practitioners looking to better understand modern statistical methods as well as R programming. Rand R. Wilcox, PhD, is Professor in the Department of Psychology at the University of Southern California, Fellow of the Association for Psychological Science, and an associate editor for four statistics journals. He is also a member of the International Statistical Institute. The author of more than 320 articles published in a variety of statistical journals, he is also the author eleven other books on statistics. Dr. Wilcox is creator of WRS (Wilcox ' Robust Statistics), which is an R package for performing robust statistical methods. His main research interest includes statistical methods, particularly robust methods for comparing groups and studying associations.