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| Altri autori (Persone) | HarringJeffrey <1964-> LongJeffrey D. <1964-> |
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| Soggetti | Bootstrap (Statistics) Random data (Statistics) Psychology - Data processing R (Computer program language) Distribution (Probability theory) Electronic books. |
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| Nota di contenuto | Comparing Groups: Randomization and Bootstrap Methods Using R; CONTENTS; List of Figures; List of Tables; Foreword; Preface; Acknowledgments; 1 An Introduction to R; 1.1 Getting Started; 1.1.1 Windows OS; 1.1.2 Mac OS; 1.1.3 Add-On Packages; 1.2 Arithmetic: R as a Calculator; 1.3 Computations in R: Functions; 1.4 Connecting Computations; 1.4.1 Naming Conventions; 1.5 Data Structures: Vectors; 1.5.1 Creating Vectors in R; 1.5.2 Computation with Vectors; 1.5.3 Character and Logical Vectors; 1.6 Getting Help; 1.7 Alternative Ways to Run R; 1.8 Extension: Matrices and Matrix Operations 1.8.1 Computation with Matrices 1.9 Further Reading; Problems; 2 Data |

Representation and Preparation; 2.1 Tabular Data; 2.1.1 External Formats for Storing Tabular Data; 2.2 Data Entry; 2.2.1 Data Codebooks; 2.3 Reading Delimited Data into R; 2.3.1 Identifying the Location of a File; 2.3.2 Examining the Data in a Text Editor; 2.3.3 Reading Delimited Separated Data: An Example; 2.4 Data Structure: Data Frames; 2.4.1 Examining the Data Read into R; 2.5 Recording Syntax using Script Files; 2.5.1 Documentation File; 2.6 Simple Graphing in R
 2.6.1 Saving Graphics to Insert into a Word-Processing File
 2.7 Extension: Logical Expressions and Graphs for Categorical Variables; 2.7.1 Logical Operators; 2.7.2 Measurement Level and Analysis; 2.7.3 Categorical Data; 2.7.4 Plotting Categorical Data; 2.8 Further Reading; Problems; 3 Data Exploration: One Variable; 3.1 Reading In the Data; 3.2 Nonparametric Density Estimation; 3.2.1 Graphically Summarizing the Distribution; 3.2.2 Histograms; 3.2.3 Kernel Density Estimators; 3.2.4 Controlling the Density Estimation; 3.2.5 Plotting the Estimated Density; 3.3 Summarizing the Findings
 3.3.1 Creating a Plot for Publication
 3.3.2 Writing Up the Results for Publication; 3.4 Extension: Variability Bands for Kernel Densities; 3.5 Further Reading; Problems; 4 Exploration of Multivariate Data: Comparing Two Groups; 4.1 Graphically Summarizing the Marginal Distribution; 4.2 Graphically Summarizing Conditional Distributions; 4.2.1 Indexing: Accessing Individuals or Subsets; 4.2.2 Indexing Using a Logical Expression; 4.2.3 Density Plots of the Conditional Distributions; 4.2.4 Side-by-Side Box-and-Whiskers Plots; 4.3 Numerical Summaries of Data: Estimates of the Population Parameters
 4.3.1 Measuring Central Tendency
 4.3.2 Measuring Variation; 4.3.3 Measuring Skewness; 4.3.4 Kurtosis; 4.4 Summarizing the Findings; 4.4.1 Creating a Plot for Publication; 4.4.2 Using Color; 4.4.3 Selecting a Color Palette; 4.5 Extension: Robust Estimation; 4.5.1 Robust Estimate of Location: The Trimmed Mean; 4.5.2 Robust Estimate of Variation: The Winsorized Variance; 4.6 Further Reading; Problems; 5 Exploration of Multivariate Data: Comparing Many Groups; 5.1 Graphing Many Conditional Distributions; 5.1.1 Panel Plots; 5.1.2 Side-by-Side Box-and-Whiskers Plots
 5.2 Numerically Summarizing the Data

Sommario/riassunto

"This book, written by three behavioral scientists for other behavioral scientists, addresses common issues in statistical analysis for the behavioral and educational sciences. Modern Statistical & Computing Methods for the Behavioral and Educational Sciences using R emphasizes the direct link between scientific research questions and data analysis. Purposeful attention is paid to the integration of design, statistical methodology, and computation to propose answers to specific research questions. Furthermore, practical suggestions for the analysis and presentation of results, in prose, tables and/or figures, are included. Optional sections for each chapter include methodological extensions for readers desiring additional technical details. Rather than focus on mathematical calculations like so many other introductory texts in the behavioral sciences, the authors focus on conceptual explanations and the use of statistical computing. Statistical computing is an integral part of statistical work, and to support student learning in this area, examples using the R computer program are provided throughout the book. Rather than relegate examples to the end of chapters, the authors interweave computer examples with the narrative of the book. Topical coverage includes an introduction to R, data exploration of one variable, data exploration of multivariate data - comparing two groups and many groups, permutation and randomization tests, the independent samples t-Test, the Bootstrap

test, interval estimates and effect sizes, power, and dependent samples"--
