

1. Record Nr.	UNINA9910300462103321
Autore	Baldock Sarah
Titolo	Using R for Statistics [[electronic resource] /] / by Sarah Baldock
Pubbl/distr/stampa	Berkeley, CA : , : Apress : , : Imprint : Apress, , 2014
ISBN	1-4842-0139-6
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (232 p.)
Collana	The expert's voice in R
Disciplina	570.1 570.1/5195
Soggetti	Big data Software engineering R (Computer program language) Big Data Software Engineering/Programming and Operating Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"The Expert's Voice in R"--Cover. Includes index.
Nota di contenuto	Contents at a Glance; Introduction; Chapter 1: R Fundamentals; Downloading and Installing R; Getting Orientated; The R Console and Command Prompt; Functions; Objects; Simple Objects; Vectors; Data Frames; The Data Editor; Workspaces; Error Messages; Script Files; Summary; Chapter 2: Working with Data Files; Entering Data Directly; Importing Plain Text Files; CSV and Tab-Delimited Files; DIF Files; Other Plain Text Files; Importing Excel Files; Importing Files from Other Software; Using Relative File Paths; Exporting Datasets; Summary; Chapter 3: Preparing and Manipulating Your Data; Variables Rearranging and Removing VariablesRenaming Variables; Variable Classes; Calculating New Numeric Variables; Dividing a Continuous Variable into Categories; Working with Factor Variables; Manipulating Character Variables; Concatenating Character Strings; Extracting a Substring; Searching a Character Variable; Working with Dates and Times; Adding and Removing Observations; Adding New Observations; Removing Specific Observations; Removing Duplicate Observations; Selecting a Subset of the Data; Selecting a Subset According to Selection Criteria; Selecting a Random Sample from a Dataset

Sorting a Dataset; Summary; Chapter 4: Combining and Restructuring Datasets; Appending Rows; Appending Columns; Merging Datasets by Common Variables; Stacking and Unstacking a Dataset; Stacking Data; Unstacking Data; Reshaping a Dataset; Summary; Chapter 5: Summary Statistics for Continuous Variables; Univariate Statistics; Statistics by Group; Measures of Association; Covariance; Pearson's Correlation Coefficient; Spearman's Rank Correlation Coefficient; Hypothesis Test of Correlation; Comparing a Sample with a Specified Distribution; Shapiro-Wilk Test; Kolmogorov-Smirnov Test
Confidence Intervals and Prediction Intervals; Summary; Chapter 6: Tabular Data; Frequency Tables; Creating Tables; Displaying Tables; Creating Tables from Count Data; Creating a Table Directly; Chi-Square Goodness-of-Fit Test; Tests of Association Between Categorical Variables; Chi-Square Test of Association; Fisher's Exact Test; Proportions Test; Summary; Chapter 7: Probability Distributions; Probability Distributions in R; Probability Density Functions and Probability Mass Functions; Finding Probabilities; Finding Quantiles; Generating Random Numbers; Summary; Chapter 8: Creating Plots
Simple Plots; Histograms; Normal Probability Plots; Stem-and-Leaf Plots; Bar Charts; Pie Charts; Scatter Plots; Scatterplot Matrices; Box Plots; Plotting a Function; Exporting and Saving Plots; Summary; Chapter 9: Customizing Your Plots; Titles and Labels; Axes; Colors; Plotting Symbols; Plotting Lines; Shaded Areas; Adding Items to Plots; Adding Straight Lines; Adding a Mathematical Function Curve; Adding Labels and Text; Adding a Grid; Adding Arrows; Overlaying Plots; Adding a Legend; Multiple Plots in the Plotting Area; Changing the Default Plot Settings; Summary
Chapter 10: Hypothesis Testing

Sommario/riassunto

Using R for Statistics will get you the answers to most of the problems you are likely to encounter when using a variety of statistics. This book is a problem-solution primer for using R to set up your data, pose your problems and get answers using a wide array of statistical tests. The book walks you through R basics and how to use R to accomplish a wide variety statistical operations. You'll be able to navigate the R system, enter and import data, manipulate datasets, calculate summary statistics, create statistical plots and customize their appearance, perform hypothesis tests such as the t-tests and analyses of variance, and build regression models. Examples are built around actual datasets to simulate real-world solutions, and programming basics are explained to assist those who do not have a development background. After reading and using this guide, you'll be comfortable using and applying R to your specific statistical analyses or hypothesis tests. No prior knowledge of R or of programming is assumed, though you should have some experience with statistics.
