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Titolo	Guidebook to R graphics using Microsoft Windows // Kunio Takezawa
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Descrizione fisica	1 online resource (280 p.)
Classificazione	MAT029000
Disciplina	006.6/633
Soggetti	Computer graphics R (Computer program language)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Guidebook to R Graphics Using Microsoft® Windows; CONTENTS; Preface; Acknowledgments; 1 Basic Graphics; 1.1 Introduction; 1.2 Downloading and installation of R; 1.3 Start-up of R, and construction and execution of R programs; 1.4 Coordinate axes; 1.5 Points and straight lines; 1.6 Reuse of graphs produced by R; 1.7 Text; 1.8 Various points and straight lines; 1.9 Fonts; 1.10 Figures such as circles and rectangles; 1.11 Legends and logarithmic plots; 1.12 Bar charts; 1.13 Pie charts; 1.14 Layout of multiple graphs; 1.15 Summary; Exercises; 2 Graphics for Statistical Analysis; 2.1 Introduction 2.2 Stem-and-leaf displays 2.3 Histograms and probability density functions; 2.4 Strip chart; 2.5 Boxplots; 2.6 Multiple-axis layouts; 2.7 Display of confidence intervals; 2.8 Scatter plot matrices; 2.9 Radar charts and parallel charts; 2.10 Functions of one variable; 2.11 Functions of two variables; 2.12 Map graphs; 2.13 Histograms of two variables; 2.14 Time series graphs of two variables; 2.15 Implicit functions; 2.16 Probability density functions; 2.17 Differential values and values of integrals; 2.18 Summary; Exercises; 3 Interactive R Programs; 3.1 Introduction 3.2 Positioning by mouse on a graphics window 3.3 Inputting values on

the console window to draw a graph; 3.4 Reading data from a data file; 3.5 Moving data on a natural spline; 3.6 Understanding simple regression; 3.7 Adjusting three-dimensional graphs; 3.8 Constructing polynomial regression equations interactively; 3.9 Understanding local linear regression; 3.10 Summary; Exercises; 4 Graphics Obtained Using Packages Based on R; 4.1 Introduction; 4.2 Package "rimage"; 4.3 Package "gplots"; 4.4 Package "ggplot2"; 4.5 Package "scatterplot3d"; 4.6 Package "rgl"; 4.7 Package "misc3d"; 4.8 Package "aplpack"; 4.9 Package "vegan"; 4.10 Package "tripack"; 4.11 Package "ade4"; 4.12 Package "vioplot"; 4.13 Package "plotrix"; 4.14 Package "rworldmap"; Exercises; 5 Appendix; A.1 Digital files; A.2 Free software; A.3 Data; Index

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## Sommario/riassunto

"Guidebook to R Graphics Using Microsoft Windows supplies an elementary-level introduction to the R software environment while also presenting a unique focus on software's ability to generate high-quality graphics. Rather than speak to readers who use R on a regular basis to perform statistical analyses, this book addresses the audience of researchers and students who are not familiar with the software but would like to utilize its graphic functionalities to create visual representations of data for use in their everyday work. The author presents the most commonly-used methods for constructing graphs-allowing readers to gain familiarity with the program's main features, rather than outline R functions and operations in great detail. The book begins with two introductory chapters on getting started with R, producing and running R programs, and techniques for sharing displayed graphics with other softwares and saving graphs as digital files. A discussion of base-package plotting functions is also provided along with how-to guides for developing various kinds of graphics for statistical analysis, including steam-and-leaf displays, boxplots, histograms, scatterplots matrices, and map graphs. Next, the author outlines the interactive R programs that can be used to carry out common tasks related to creating graphics, such as inputting values, moving data on a natural spline, adjusting three-dimensional graphs, and understanding simple and local linear regression. The book concludes with a chapter on the various external packages for R that can be used to create more complex graphics, including rimage, gplots, ggplot2, tripack, rworldmap, and plotrix packages. The scope of coverage and fluid presentation of the material allow the book to serve as a platform for readers to work creatively and productively with their own data while also unveiling the illustrative capabilities of R. The author's explanations are accompanied by numerous screenshots, graphics, and the appropriate R code. A related FTP site houses additional data sets and information on external R packages"--

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