

1. Record Nr.	UNINA9910141528803321
Autore	Good Phillip I
Titolo	Introduction to statistics through resampling methods and R [[electronic resource] /] / Phillip I. Good
Pubbl/distr/stampa	Hoboken, N.J., : John Wiley & Sons, Inc., 2013
ISBN	1-118-49759-7 1-118-49756-2 1-283-95001-4 1-118-49757-0
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (224 p.)
Classificazione	MAT029000
Disciplina	519.5/4
Soggetti	Resampling (Statistics) R (Computer program language)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes indexes.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Title page; Copyright page; Contents; Preface; Chapter 1: Variation; 1.1 Variation; 1.2 Collecting Data; 1.2.1 A Worked-Through Example; 1.3 Summarizing Your Data; 1.3.1 Learning to Use R; 1.4 Reporting Your Results; 1.4.1 Picturing Data; 1.4.2 Better Graphics; 1.5 Types of Data; 1.5.1 Depicting Categorical Data; 1.6 Displaying Multiple Variables; 1.6.1 Entering Multiple Variables; 1.6.2 From Observations to Questions; 1.7 Measures of Location; 1.7.1 Which Measure of Location?; *1.7.2 The Geometric Mean; 1.7.3 Estimating Precision; 1.7.4 Estimating with the Bootstrap 1.8 Samples and Populations1.8.1 Drawing a Random Sample; *1.8.2 Using Data That Are Already in Spreadsheet Form; 1.8.3 Ensuring the Sample Is Representative; 1.9 Summary and Review; Chapter 2: Probability; 2.1 Probability; 2.1.1 Events and Outcomes; 2.1.2 Venn Diagrams; 2.2 Binomial Trials; 2.2.1 Permutations and Rearrangements; *2.2.2 Programming Your Own Functions in R; 2.2.3 Back to the Binomial; 2.2.4 The Problem Jury; *2.3 Conditional Probability; 2.3.1 Market Basket Analysis; 2.3.2 Negative Results; 2.4 Independence; 2.5 Applications to Genetics; 2.6 Summary and Review Chapter 3: Two Naturally Occurring Probability Distributions3.1

Distribution of Values; 3.1.1 Cumulative Distribution Function; 3.1.2 Empirical Distribution Function; 3.2 Discrete Distributions; 3.3 The Binomial Distribution; *3.3.1 Expected Number of Successes in n Binomial Trials; 3.3.2 Properties of the Binomial; 3.4 Measuring Population Dispersion and Sample Precision; 3.5 Poisson: Events Rare in Time and Space; 3.5.1 Applying the Poisson; 3.5.2 Comparing Empirical and Theoretical Poisson Distributions; 3.5.3 Comparing Two Poisson Processes; 3.6 Continuous Distributions
3.6.1 The Exponential Distribution
3.7 Summary and Review; Chapter 4: Estimation and the Normal Distribution; 4.1 Point Estimates; 4.2 Properties of the Normal Distribution; 4.2.1 Student's t-Distribution; 4.2.2 Mixtures of Normal Distributions; 4.3 Using Confidence Intervals to Test Hypotheses; 4.3.1 Should We Have Used the Bootstrap?; 4.3.2 The Bias-Corrected and Accelerated Nonparametric Bootstrap; 4.3.3 The Parametric Bootstrap; 4.4 Properties of Independent Observations; 4.5 Summary and Review; Chapter 5: Testing Hypotheses; 5.1 Testing a Hypothesis; 5.1.1 Analyzing the Experiment
5.1.2 Two Types of Errors
5.2 Estimating Effect Size; 5.2.1 Effect Size and Correlation; 5.2.2 Using Confidence Intervals to Test Hypotheses; 5.3 Applying the t-Test to Measurements; 5.3.1 Two-Sample Comparison; 5.3.2 Paired t-Test; 5.4 Comparing Two Samples; 5.4.1 What Should We Measure?; 5.4.2 Permutation Monte Carlo; 5.4.3 One-vs. Two-Sided Tests; 5.4.4 Bias-Corrected Nonparametric Bootstrap; 5.5 Which Test Should We Use?; 5.5.1 p-Values and Significance Levels; 5.5.2 Test Assumptions; 5.5.3 Robustness; 5.5.4 Power of a Test Procedure; 5.6 Summary and Review
Chapter 6: Designing an Experiment or Survey

Sommario/riassunto

"Intended for class use or self-study, the second addition of this text aspires like the first to introduce statistical methodology to a wide audience, simply and intuitively, through resampling from the data at hand. The methodology proceeds from chapter to chapter from the simple to the complex"--
