

1. Record Nr.	UNINA9910140591203321
Titolo	Statistical bioinformatics [[electronic resource]] : a guide for life and biomedical science researchers // edited by Jae K. Lee
Pubbl/distr/stampa	Hoboken, NJ, : Wiley, c2010
ISBN	1-118-21152-9 1-282-69036-1 9786612690365 0-470-56764-3 0-470-56763-5
Descrizione fisica	1 online resource (386 p.)
Altri autori (Persone)	LeeJae K
Disciplina	570.285
Soggetti	Bioinformatics - Statistical methods Biology - Data processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	STATISTICAL BIOINFORMATICS; CONTENTS; PREFACE; CONTRIBUTORS; 1 ROAD TO STATISTICAL BIOINFORMATICS; 2 PROBABILITY CONCEPTS AND DISTRIBUTIONS FOR ANALYZING LARGE BIOLOGICAL DATA; 3 QUALITY CONTROL OF HIGH-THROUGHPUT BIOLOGICAL DATA; 4 STATISTICAL TESTING AND SIGNIFICANCE FOR LARGE BIOLOGICAL DATA ANALYSIS; 5 CLUSTERING: UNSUPERVISED LEARNING IN LARGE BIOLOGICAL DATA; 6 CLASSIFICATION: SUPERVISED LEARNING WITH HIGH-DIMENSIONAL BIOLOGICAL DATA; 7 MULTIDIMENSIONAL ANALYSIS AND VISUALIZATION ON LARGE BIOMEDICAL DATA; 8 STATISTICAL MODELS, INFERENCE, AND ALGORITHMS FOR LARGE BIOLOGICAL DATA ANALYSIS 9 EXPERIMENTAL DESIGNS ON HIGH-THROUGHPUT BIOLOGICAL EXPERIMENTS10 STATISTICAL RESAMPLING TECHNIQUES FOR LARGE BIOLOGICAL DATA ANALYSIS; 11 STATISTICAL NETWORK ANALYSIS FOR BIOLOGICAL SYSTEMS AND PATHWAYS; 12 TRENDS AND STATISTICAL CHALLENGES IN GENOMEWIDE ASSOCIATION STUDIES; 13 R AND BIOCONDUCTOR PACKAGES IN BIOINFORMATICS: TOWARDS SYSTEMS BIOLOGY; INDEX

Sommario/riassunto

This book provides an essential understanding of statistical concepts necessary for the analysis of genomic and proteomic data using computational techniques. The author presents both basic and advanced topics, focusing on those that are relevant to the computational analysis of large data sets in biology. Chapters begin with a description of a statistical concept and a current example from biomedical research, followed by more detailed presentation, discussion of limitations, and problems. The book starts with an introduction to probability and statistics for genome-wide data, and moves into
