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Sommario/riassunto

This textbook covers the fundamentals of statistical inference and statistical theory including Bayesian and frequentist approaches and methodology possible without excessive emphasis on the underlying mathematics. This book is about some of the basic principles of statistics that are necessary to understand and evaluate methods for analyzing complex data sets. The likelihood function is used for pure likelihood inference throughout the book. There is also coverage of severity and finite population sampling. The material was developed from an introductory statistical theory course taught by the author at the Johns Hopkins University's Department of Biostatistics. Students and instructors in public health programs will benefit from the likelihood modeling approach that is used throughout the text. This will also appeal to epidemiologists and psychometricians. After a brief introduction, there are chapters on estimation, hypothesis testing, and maximum likelihood modeling. The book concludes with sections on Bayesian computation and inference. An appendix contains unique coverage of the interpretation of probability, and coverage of probability and mathematical concepts.
