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Titolo	Exercise Book of Statistical Inference / / by Francesca Gasperoni, Francesca Ieva, Anna Maria Paganoni
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Altri autori (Persone)	IevaFrancesca PaganoniAnna Maria
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Nota di contenuto	Part I: Statistical Inference -- 1 Fundamentals of Probability and Statistics -- 2 Sufficient, Minimal, and Complete Statistics -- 3 Point Estimators -- 4 Uniform Minimum Variance Unbiased Estimators (UMVUEs) -- 5 Likelihood Ratio Test -- 6 Uniformly Most Powerful Test -- 7 Confidence Intervals -- 8 Asymptotic Statistics -- Part II: Regression Models and Analysis of Variance -- 9 Linear Regression -- 10 Generalized Linear Models -- 11 ANOVA: Analysis of Variance -- 12 Summary Exercises -- Appendix A: Probability Distributions.
Sommario/riassunto	This book was created with the goal of helping students transition from the theoretical and methodological concepts of statistical inference to their implementation on a computer. The first part of the book is primarily focused on exercises to be solved with pen and paper, so that students can apply knowledge derived from lemmas and theorems; while the second part consists of labs, which involve both the manual implementation of algorithms and the learning of built-in tools for efficient analysis of datasets derived from real-world problems. To optimize the understanding of the topics developed and to guide the reader through their studies, the book is organized into chapters, each

of which includes an introductory section that reviews the theoretical foundations of statistical inference, followed by a second part with exercises, each accompanied by a comprehensive solution on paper and, when appropriate, using software. This book is aimed at undergraduate students in Statistics, Mathematics, Engineering, and for graduate-level courses in Data Science.