Book-Reviews | Reseñas

FOUNDATIONS OF STATISTICS FOR DATA SCIENTISTS WITH R AND PYTHON

Alan Agresti, Maria Kateri   (2022)
Chapman and Hall/CRC   xi+486
ISBN 9780367748456

This is a good text book for statistical courses supporting an introduction to mathematical statistics. It is of specially useful for people looking for a training to become data scientists. Readers will obtain what is needed for dealing with concepts, terminology, and methods. The authors assume the readers have a basic knowledge of calculus and probability. The theory is balanced with the use of real-world data for illustrating how the concepts are of use in for comprehending statistical outputs. Mathematics, maintained a low level and logical reasoning, is mainly used for introducing methods and software. An emphasis is made on implementing statistical methods and performing simulations. The statistical analyses use R software, and Python.
The chapters are: 1. Introduction to Statistical Science; 2. Probability Distributions; 3. Sampling Distributions; 4. Statistical Inference: Estimation Skip Product Menu; 5. Statistical Inference: Significance Testing; 6. Linear Models and Least Squares; 7. Generalized Linear Models; 8. Classification and Clustering; 9. Statistical Science: A Historical Overview Appendices

E. Sarkar
Bhat Sarkar Business School

NUMERICAL ANALYSIS AND SCIENTIFIC COMPUTATION (TEXTBOOKS IN MATHEMATICS) 2nd Edition

Jeffery J. Leader (2022)
Chapman and Hall/CRC; (2nd edition 2022)   xxi+582
ISBN-10 : 0367486865   ISBN-13 : 978-0367486860
This new edition of this text is not only a good addition to the library of the professor in the theme as it provides fresh modernity in the discussions, including data science. The needed methods and usage of softwares are up-dated approach to computational matrix algebra and an emphasis on methods used in actual software packages, always highlighting how hardware concerns can impact the choice of algorithm. They are derived. Students must have elements of calculus and of abilities on computing with MATLAB , but tutorials are included at the end of sections. .
It my used by teachers working in areas as Parallel Computer Programming, Number Systems Mathematical Analysis etc.

M. Miroslav
Advanced Computer Academy

THEORETICAL NUMERICAL ANALYSIS: AN INTRODUCTION TO ADVANCED TECHNIQUES

Peter Linz (2019)
Dover   vii+240
ISBN 10 0486833615

The book is to be considered as an adequate text book of advanced courses in numerical computing . It consists of three-parts. The initial part presents the basic on functional analysis and approximation theory The main theory on numerical analysis (integration, approximating methods, the minimization of etc., is contained in the second part. Finally, part 3 considers subjects on the usage of theoretical analysis for modeling and enhancing better results...

M. Miroslav
Advanced Computer Academy

MODEL-ASSISTED BAYESIAN DESIGNS FOR DOSE FINDING AND OPTIMIZATION METHODS AND APPLICATIONS

Ying Yuan, Ruitao Lin and J. Jack Lee (2023)
Chapman & Hall   xii+234
ISBN 9780367146245

The book presents the basic ideas and tools for real-life practice in Bayesian model-assisted designs. Early-phase clinical trials involve solving different practical issues and challenges. Sometimes, the solutions of them are overcome, if correctly modeled. The `problematics of dose-findings via Bayesian model-assisted designs and optimization clinical trials are discussed at large. Early phase trials, as they form the basis for the success, modeling of II and III trials , depend heavily of the correct use of models. The state-of-the-art in Bayesian model-assisted designs is provided , facilitating using novel designing for early phase clinical trials. Readers may obtain at www.trialdesign.org, freely and easy-to-use software for studying and implementing Bayesian model-assisted designs
The authors are pioneers in model-assisted designing

Y. Y. Gupta
Bhat Sarkar Business School

MODERN DATA SCIENCE WITH R. 2nd Edition

Benjamin S. Baumer, Daniel T. Kaplan, Nicholas J. Horton, (2021).
Chapman and Hall/CRC ,   xx+650
ISBN 9780367191498

Data science needs of courses somewhat different from applied statistics . This is a textbook for undergraduates connected with Data Sciences studies. It covers the needful contents in statistical and computational issues for dealing with real-world data problems. The 21 chapters of the book are divided in four parts: Introduction to Data Science , Prologue: Why data science?, Statistics and Modeling, Topics in Data Science , Appendices.
The packages used in the book are well documented. The book may be used by undergraduates and graduate students of data science courses and professional work.

As. C. El-Wahab
Bhat Sarkar Business School-