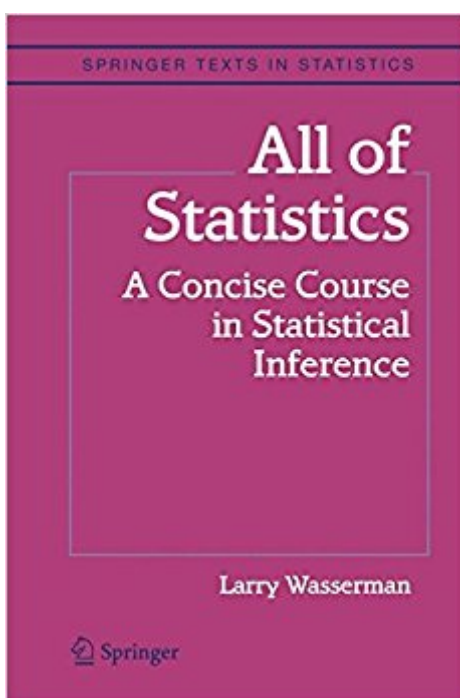The book was found

All Of Statistics: A Concise Course In Statistical Inference (Springer Texts In Statistics)

Synopsis

Taken literally, the title "All of Statistics" is an exaggeration. But in spirit, the title is apt, as the book does cover a much broader range of topics than a typical introductory book on mathematical statistics. This book is for people who want to learn probability and statistics quickly. It is suitable for graduate or advanced undergraduate students in computer science, mathematics, statistics, and related disciplines.Ã Â The book includes modern topics like non-parametric curve estimation, bootstrapping, and classification, topics that are usually relegated to follow-up courses. The reader is presumed to know calculus and a little linear algebra. No previous knowledge of probability and statistics is required. Statistics, data mining, and machine learning are all concerned with collecting and analysing data.Ã Â

Book Information

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Customer Reviews

Winner of the 2005 DeGroot Prize.From the reviews:"Presuming no previous background in statistics and described by the author as "demanding" yet "understandable because the material is as intuitive as possible" (p. viii), this certainly would be my choice of textbook if I was required to learn mathematical statistics again for a couple of semesters." Technometrics, August 2004"This book should be seriously considered as a text for a theoretical statsitics course for non-majors, and perhaps even for majors...The coverage of emerging and important topics is timely and welcomed...you should have this book on your desk as a reference to nothing less than 'All of

Statistics.'" Biometrics, December 2004"Although All of Statistics is an ambitious title, this book is a concise guide, as the subtitle suggests....I recommend it to anyone who has an interest in learning something new about statistical inference. There is something here for everyone." The American Statistician, May 2005"As the title of the book suggests, Ã¢â ¬ËœAll of StatisticsÃ¢â ¬â„¢ covers a wide range of statistical topics. Ã¢â ¬Â| The number of topics covered in this book is vast Ã¢â ¬Â| . The greatest strength of this book is as a first point of reference for a wide range of statistical methods. Ã¢â ¬Â| I would recommend this book as a useful and interesting introduction to a large number of statistical topics for non-statisticians and also as a useful reference book for practicing statisticians." (Matthew J. Langdon, Journal of Applied Statistics, Vol. 32 (1), January, 2005)"This book was written specifically to give students a quick but sound understanding of modern statistics, and its coverage is very wide. Ã¢â ¬Â| The book is extremely well done Ã¢â ¬Â| ." (N. R. Draper, Short Book Reviews, Vol. 24 (2), 2004)"This is most definitely a book about mathematical statistics. It is full of theorems and proofs Ã¢â ¬Â| . Presuming no previous background in statistics Ã¢â ¬Â| this certainly would be my choice of textbook if I was required to learn mathematical statistics again for a couple of semesters." (Eric R. Ziegel, Technometrics, Vol. 46 (3), August, 2004)"The author points out that this book is for those who wish to learn probability and statistics quickly Ã¢â ¬Â| . this book will serve as a guideline for instructors as to what should constitute a basic education in modern statistics. It introduces many modern topics Ã¢â ¬Â| . Adequate references are provided at the end of each chapter which the instructor will be able to use profitably Ã¢â ¬Â| ." (Arup Bose, Sankhya, Vol. 66 (3), 2004)"The amount of material that is covered in this book is impressive. Ã¢â ¬Â| the explanations are generally clear and the wide range of techniques that are discussed makes it possible to include a diverse set of examples Ã¢â ¬Â| . The worked examples are complemented with numerous theoretical and practical exercises Ã¢â ¬Â| . is a very useful overview of many areas of modern statistics and as such will be very useful to readers who require such a survey. Library copies would also see plenty of use." (Stuart Barber, Journal of the Royal Statistical Society, Series A Ã¢â ¬â œ Statistics in Society, Vol. 168 (1), 2005)

This book is for people who want to learn probability and statistics quickly. It brings together many of the main ideas in modern statistics in one place. The book is suitable for students and researchers in statistics, computer science, data mining and machine learning. This book covers a much wider range of topics than a typical introductory text on mathematical statistics. It includes modern topics like nonparametric curve estimation, bootstrapping and classification, topics that are usually relegated to follow-up courses. The reader is assumed to know calculus and a little linear algebra.

No previous knowledge of probability and statistics is required. The text can be used at the advanced undergraduate and graduate level. Larry Wasserman is Professor of Statistics at Carnegie Mellon University. He is also a member of the Center for Automated Learning and Discovery in the School of Computer Science. His research areas include nonparametric inference, asymptotic theory, causality, and applications to astrophysics, bioinformatics, and genetics. He is the 1999 winner of the Committee of Presidents of Statistical Societies Presidents' Award and the 2002 winner of the Centre de recherches mathematiques de MontrealÃ¢ ¬â œStatistical Society of Canada Prize in Statistics. He is Associate Editor of The Journal of the American Statistical Association and The Annals of Statistics. He is a fellow of the American Statistical Association and of the Institute of Mathematical Statistics.

This book gives an overview of classical statistics, with an introduction to more modern methods of robust estimation and machine learning. I would say the contents are more focused on practical methods, but the author is always careful to state the necessary theorems from the underlying mathematical foundations of each method. Most of the theorems are stated without proof, although almost each chapter is followed by a short appendix giving some more technical details. Providing a proof for each theorem would take a lot of space and would detract from the applied aspects of this book. What I like is that each chapter has a nice list of references, so an interested reader could go on and explore each subject in more depth with all the mathematical details they need.The subjects covered is a compromise between the practical side of classical statistics and the modern methods of machine learning. They include convergence, the delta method, point estimation, hypothesis testing and confidence intervals, bootstrap, regression, non-parametric estimation, orthogonal functions, classification, graphical models, and monte carlo for integral evaluation. There is some bayesian estimation, but mostly the book follows a frequentist approach.I think that this book would be useful only for someone already familiar with classical statistics. It could serve as a good modern reference on statistics and an overview of some methods from machine learning. I do not think that this book is a good source for first exposure to these ideas. Someone should first go through a standard statistics book, such as for example Casella & Berger or Bickel & Doksum. Then this book could server as a "crossover" from that classical material to the modern methods of machine learning. After that the reader can go on to explore machine learning literature on their own, using this book as a guide.There are a small number of typos throughout the book. They pick up in chapter 22 on classification, where there are some typos in important equations, for example equation 22.21 on Fisher discriminant and the formula for epsilon in theorem 22.17. But overall I

had a very positive experience reading this book. It helped me review some stuff I already learned, showed some new applications, and introduced some topics which I look forward to exploring further.

This is the first book I pull down from the shelf when I need a refresher or I am working through some concept and feel like I am missing some foundation somewhere. Also have used it as supplemental text in self-instruction in a wide variety of areas. The explanations are practical, well-written and the notation supports the explanations (instead of the other way around). Lots of concepts that I have wrestled with in other texts finally clicked for me after reading the write-up in this book. Can't recommend it highly enough.

I find it hard to rate the quality of the book. I am from a non-mathematical background (I got no further than calculus in college), and I've been working for three years now on building math skills, especially statistical analysis and inference. I asked a fellow employee (whom I thought I could trust) for a recommendation on a good book for someone with rusty math skills who is trying to learn statistics. This was his recommendation.This is NOT the book for that purpose. I realized on my first perusal of the book that he was being snide and sarcastic, as I subsequently learned was his custom. This book is a reference, full of complex mathematical notation, that is excellent (so far as I can determine) for reviewing concepts you have already learned and mastered. It is the worst possible choice for someone who is just starting out on learning statistics.I can now, finally, begin to dip into this book at least in places, and follow the material. So I'm glad, in the end, that I got it. It will eventually prove useful to me.

I'm not finished with the book but find it very readable and helpful. I was a little disappointed to receive the book and notice that there was a problem with its binding. It wasn't enough of a problem for me to want to return the book, but annoying nonetheless.

Wonderful overview of mathematical statistics. great resource for looking things up when you need them.

It has helped me so far with my need for probability reference material. It looks like it has more advanced statistical inference material that I may need to reference in the future.

All of Statistics: A Concise Course in Statistical Inference (Springer Texts in Statistics) The Elements of Statistical Learning: Data Mining, Inference, and Prediction, Second Edition (Springer Series in Statistics) A First Course in Bayesian Statistical Methods (Springer Texts in Statistics) An Introduction to Statistical Learning: with Applications in R (Springer Texts in Statistics) Statistical Inference Based on Divergence Measures (Statistics: A Series of Textbooks and Monographs) Statistics and Data Analysis for Financial Engineering: with R examples (Springer Texts in Statistics) Statistics and Finance: An Introduction (Springer Texts in Statistics) Matrix Algebra: Theory, Computations, and Applications in Statistics (Springer Texts in Statistics) Applied Bayesian Statistics: With R and OpenBUGS Examples (Springer Texts in Statistics) An Introduction to Probability and Statistical Inference, Second Edition Unifying Political Methodology: The Likelihood Theory of Statistical Inference Statistics for People Who (Think They) Hate Statistics (Salkind, Statistics for People Who(Think They Hate Statistics(Without CD)) Practical Statistics for Medical Research (Chapman & Hall/CRC Texts in Statistical Science) Time Series Analysis: With Applications in R (Springer Texts in Statistics) Essentials of Stochastic Processes (Springer Texts in Statistics) Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) Applied Multivariate Analysis (Springer Texts in Statistics) Matrix Algebra (Springer Texts in Statistics) Time Series Analysis and Its Applications: With R Examples (Springer Texts in Statistics) Design and Analysis of Experiments (Springer Texts in Statistics)