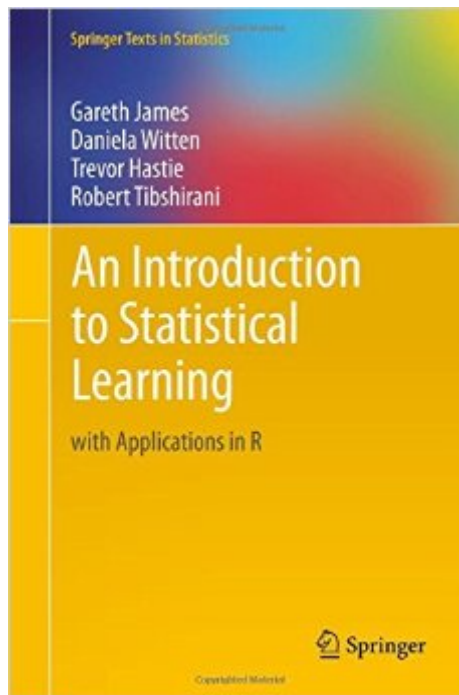# An Introduction To Statistical Learning: With Applications In R (Springer Texts In Statistics)

Synopsis

An Introduction to Statistical Learning provides an accessible overview of the field of statistical learning, an essential toolset for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. This book presents some of the most important modeling and prediction techniques, along with relevant applications. Topics include linear regression, classification, resampling methods, shrinkage approaches, tree-based methods, support vector machines, clustering, and more. Color graphics and real-world examples are used to illustrate the methods presented. Since the goal of this textbook is to facilitate the use of these statistical learning techniques by practitioners in science, industry, and other fields, each chapter contains a tutorial on implementing the analyses and methods presented in R, an extremely popular open source statistical software platform.Two of the authors co-wrote The Elements of Statistical Learning (Hastie, Tibshirani and Friedman, 2nd edition 2009), a popular reference book for statistics and machine learning researchers. An Introduction to Statistical Learning covers many of the same topics, but at a level accessible to a much broader audience. This book is targeted at statisticians and non-statisticians alike who wish to use cutting-edge statistical learning techniques to analyze their data. The text assumes only a previous course in linear regression and no knowledge of matrix algebra.

Book Information

Series: Springer Texts in Statistics (Book 103)

Hardcover: 426 pages

Publisher: Springer; 1st ed. 2013, Corr. 5th printing 2015 edition (August 12, 2013)

Language: English

ISBN-10: 1461471370

ISBN-13: 978-1461471370

Product Dimensions: 6.4 x 1 x 9.4 inches

Shipping Weight: 2 pounds (View shipping rates and policies)

Average Customer Review: 4.8 out of 5 starsÂ Â See all reviewsÂ (124 customer reviews)

Best Sellers Rank: #6,228 in Books (See Top 100 in Books)   #1 inÂ Books > Computers & Technology > Software > Mathematical & Statistical   #2 inÂ Books > Science & Math > Physics > Mathematical Physics   #2 inÂ Books > Textbooks > Computer Science > Artificial Intelligence

Customer Reviews

The book provides the right amount of theory and practice, unlike the earlier (venerable and, by

now, stable) text authored (partly) by the last two authors of this one (Elements of Statistical Learning), which was/is a little heavy on the theoretical side (at least for practitioners without a strong mathematical background). The authors make no pretense about this either. The Preface says "But ESL is intended for individuals with advanced training in the mathematical sciences. An Introduction to Statistical Learning (ISL) arose from the perceived need for a broader and less technical treatment of these topics."ISL is neither as comprehensive nor as in-depth as ESL. It is, however, an excellent introduction to Learning due to the ability of the authors to strike a perfect balance between theory and practice. Theory is there to aim the reader as to understand the purpose and the "R Labs" at the end of each chapter are as valuable (or perhaps even more) than the end-of-chapter exercises.ISL is an excellent choice for a two-semester advanced undergraduate (or early graduate) course, practitioners trained in classical statistics who want to enter the Learning space, and seasoned Machine Learners. It is especially helpful for getting the fundamentals down without being bogged down in heavy mathematical theory, a great way to kick-off corporate Learning units, or as an aid to help statisticians and learners communicate better.A needed and welcome addition to the Learning literature, authored by some of the most well respected names in industry and academia. A classic in the making. Recommended unreservedly.

An Introduction to Statistical Learning: with Applications in R (Springer Texts in Statistics) A First Course in Bayesian Statistical Methods (Springer Texts in Statistics) Statistics and Data Analysis for Financial Engineering: with R examples (Springer Texts in Statistics) The Elements of Statistical Learning: Data Mining, Inference, and Prediction, Second Edition (Springer Series in Statistics) Time Series Analysis: With Applications in R (Springer Texts in Statistics) Time Series Analysis (Springer Texts in Statistics) Essentials of Stochastic Processes (Springer Texts in Statistics) A Modern Approach to Regression with R (Springer Texts in Statistics) Regression Modeling Strategies: With Applications to Linear Models, Logistic Regression, and Survival Analysis (Springer Series in Statistics) Statistical Methods for Dynamic Treatment Regimes: Reinforcement Learning, Causal Inference, and Personalized Medicine (Statistics for Biology and Health) Statistical Learning with Sparsity: The Lasso and Generalizations (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) Introduction to Statistical Relational Learning (Adaptive Computation and Machine Learning series) Time Series: Theory and Methods (Springer Series in Statistics) The Mathematics of Medical Imaging: A Beginner's Guide (Springer Undergraduate Texts in Mathematics and Technology) ISO 3534-2:1993, Statistics - Vocabulary and symbols - Part 2: Statistical quality control Numerical Methods of Statistics (Cambridge Series in Statistical and

Probabilistic Mathematics) Statistical Mechanics (Advanced Texts in Physics) Introduction to Statistical Machine Learning Introduction to Computational Social Science: Principles and Applications (Texts in Computer Science) Discovering Statistics Using IBM SPSS Statistics, 4th Edition