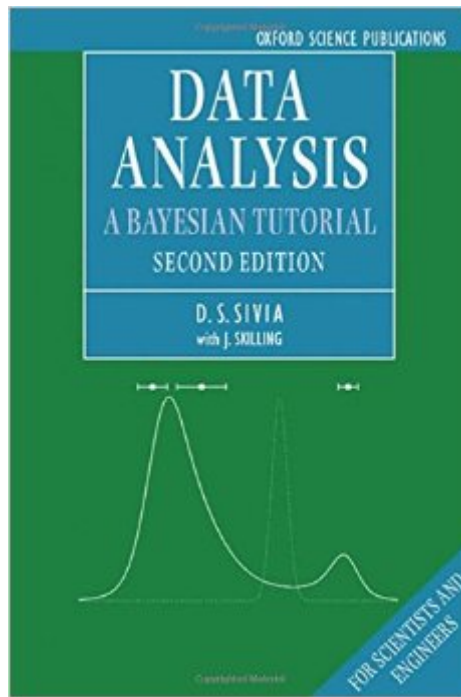


The book was found

Data Analysis: A Bayesian Tutorial



Synopsis

Statistics lectures have been a source of much bewilderment and frustration for generations of students. This book attempts to remedy the situation by expounding a logical and unified approach to the whole subject of data analysis. This text is intended as a tutorial guide for senior undergraduates and research students in science and engineering. After explaining the basic principles of Bayesian probability theory, their use is illustrated with a variety of examples ranging from elementary parameter estimation to image processing. Other topics covered include reliability analysis, multivariate optimization, least-squares and maximum likelihood, error-propagation, hypothesis testing, maximum entropy and experimental design. The Second Edition of this successful tutorial book contains a new chapter on extensions to the ubiquitous least-squares procedure, allowing for the straightforward handling of outliers and unknown correlated noise, and a cutting-edge contribution from John Skilling on a novel numerical technique for Bayesian computation called 'nested sampling'.

Book Information

Paperback: 264 pages

Publisher: Oxford University Press; 2 edition (July 27, 2006)

Language: English

ISBN-10: 0198568320

ISBN-13: 978-0198568322

Product Dimensions: 9.2 x 0.8 x 6.1 inches

Shipping Weight: 1.1 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 stars [See all reviews](#) (17 customer reviews)

Best Sellers Rank: #252,765 in Books (See Top 100 in Books) #7 in [Books > Science & Math > Physics > Entropy](#) #621 in [Books > Textbooks > Science & Mathematics > Mathematics > Statistics](#) #953 in [Books > Science & Math > Mathematics > Applied > Probability & Statistics](#)

Customer Reviews

This book is a must for those that are introducing themselves in bayesian statistics. It goes very straightforward in to the main topics and the mathematical notation is easy to follow. If you are just beginning I would recommend to read this book before Jaynes' book Probability Theory: The Logic of Science and after William M. Bolstad's Introduction to Bayesian Statistics

I really learned to appreciate Bayesian statistics by working the insightful example problems

provided in the first few sections of the book. Read Jaynes for his argumentation and philosophical underpinnings. Read Sivia to jump start your inner Bayesian.

A friend of mine introduced me to Bayesian analysis as a framework for handling the acoustic analysis problems which we deal with. He recommended this text as a good introduction to the theory and he is correct. I am working my way through the text and am trying to implement the exploration of the parameter spaces that must be explored. The book does not have code to help you get started, but that was not my purpose for getting the book. Sivia provides a very readable and comprehensive explanation of the Bayesian methods.

I've given the book four stars only because I don't feel qualified to give it five. Its exposition is truly masterful, partly because Sivia and Skilling are careful to explain the differences between quantities that could easily be (and often are) confused. The authors give numerous practical tips, with reference to real-life problems that they explain in detail. Especially helpful is the authors' practice of treating several variations of a single problem, such as: "Here's how we'd analyze the data if we knew X and Y; later, we'll treat the case where we have to estimate X; finally, we'll treat a general case where we must estimate both." Highly recommended, both for its content and as an example of how to teach a subject that's unfamiliar to most readers.

Very nice book. Fills a need for a concise 'basic' introduction to Bayesian learning. Very similar in scope to Abu Mostafa's book learning from data, to the book of Hastie, Tibshirani, James and Witten intro to statistical learning, or to Andrew Ng's Coursera machine learning intro course. Lots more math than those courses but that's to be expected for a book on Bayesian learning. There are lots of fully worked out examples in this book. The amount of math may make it hard for the less mathematically inclined reader to follow the examples. People have lots of good things to say about Kruschke's Bayesian statistics book but that one is too long to be considered a 'short course'.

Solid introduction to Bayesian statistics with several examples from the physical sciences. This very well written text is self contained. The Bayesian method is motivated from first principles and basic probability. A good companion to other "classical" Bayesian statistics books such as BDA by Gelman et al.

This is an excellent book about the use of Bayesian statistic in data analysis. It taught me a lot, and

even inspired me to apply the techniques presented in the book to my own research work. I highly recommend this book to anyone willing to learn about Bayesian statistic and applications. The book is very well written, with a lot of working examples.

Excellent reference book, great addition to your library. Easy and understandable, light reading and great problem solver. A must have if you're interested in bayesian data analysis.

[Download to continue reading...](#)

Bayesian Methods for Hackers: Probabilistic Programming and Bayesian Inference

(Addison-Wesley Data & Analytics) Data Analysis: A Bayesian Tutorial Data Analysis: A Bayesian

Tutorial (Oxford Science Publications) Data Analytics: Practical Data Analysis and Statistical Guide

to Transform and Evolve Any Business Leveraging the Power of Data Analytics, Data Science, ...

(Hacking Freedom and Data Driven Book 2) Data Architecture: A Primer for the Data Scientist: Big

Data, Data Warehouse and Data Vault Big Data For Beginners: Understanding SMART Big Data,

Data Mining & Data Analytics For improved Business Performance, Life Decisions & More! The

Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences Microsoft

Excel 2013 Data Analysis and Business Modeling: Data Analysis and Business Modeling

(Introducing) Beaded Half Hitch Macrame Bracelet Tutorial: Step by step tutorial showing how to

make a beaded macrame bracelet. Shell Scripting Tutorial For Unix Linux - Included Free 6+ Hours

of Online Tutorial Included Discovering Knowledge in Data: An Introduction to Data Mining (Wiley

Series on Methods and Applications in Data Mining) Big Data, MapReduce, Hadoop, and Spark with

Python: Master Big Data Analytics and Data Wrangling with MapReduce Fundamentals using

Hadoop, Spark, and Python LEARN IN A DAY! DATA WAREHOUSING. Top Links and Resources

for Learning Data Warehousing ONLINE and OFFLINE: Use these FREE and PAID resources to

Learn Data Warehousing in little to no time Data Just Right: Introduction to Large-Scale Data &

Analytics (Addison-Wesley Data and Analytics) Bayesian Signal Processing: Classical, Modern and

Particle Filtering Methods (Adaptive and Cognitive Dynamic Systems: Signal Processing, Learning,

Communications and Control) Ending Spam: Bayesian Content Filtering and the Art of Statistical

Language Classification Machine Learning: A Bayesian and Optimization Perspective (Net

Developers) Bayesian Designs for Phase I-II Clinical Trials (Chapman & Hall/CRC Biostatistics

Series) Bayes or Bust?: A Critical Examination of Bayesian Confirmation Theory (MIT Press)

Applied Bayesian Statistics: With R and OpenBUGS Examples (Springer Texts in Statistics)

[Dmca](#)