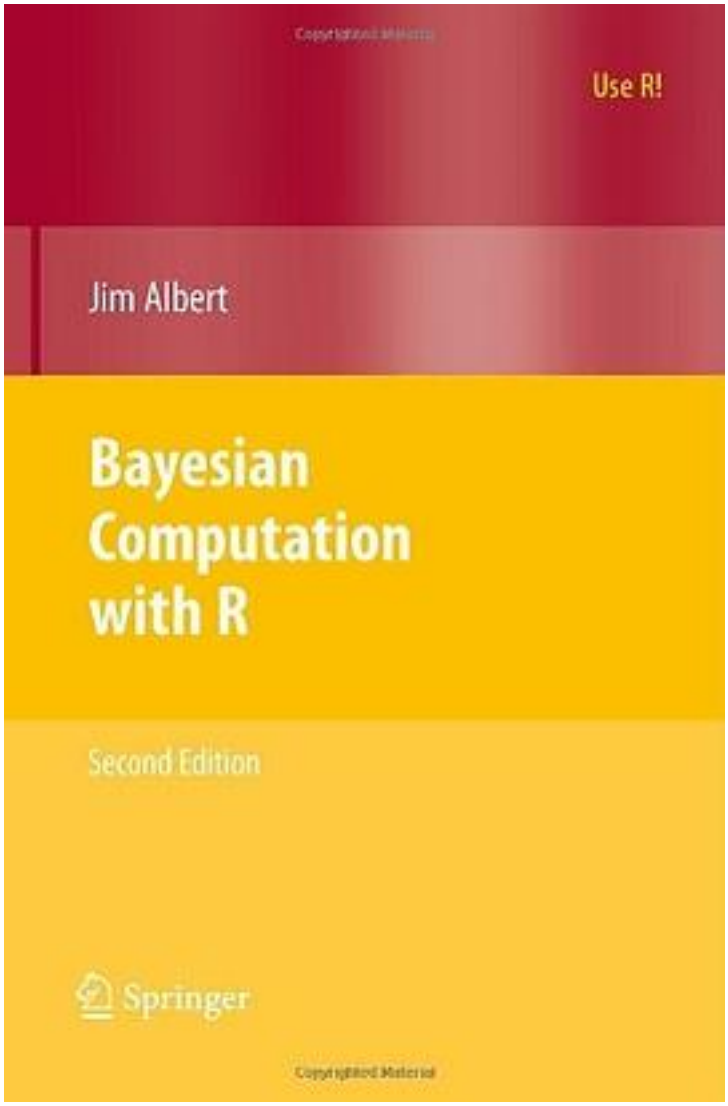
Bayesian Computation with R



Bayesian Computation with R_下载链接1_

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There has been a dramatic growth in the development and application of Bayesian inferential methods. Some of this growth is due to the availability of powerful simulation-based algorithms to summarize posterior distributions. There has been also a growing interest in the use of the system R for statistical analyses. R's open source nature, free availability, and large number of contributor packages have made R the software of choice for many statisticians in education and industry.

Bayesian Computation with R introduces Bayesian modeling by the use of computation using the R language. The early chapters present the basic tenets of Bayesian thinking by use of familiar one and two-parameter inferential problems. Bayesian computational methods such as Laplace's method, rejection sampling, and the SIR algorithm are illustrated in the context of a random effects model. The construction and implementation of Markov Chain Monte Carlo (MCMC) methods is introduced. These simulation-based algorithms are implemented for a variety of Bayesian applications such as normal and binary response regression, hierarchical modeling, order-restricted inference, and robust modeling. Algorithms written in R are used to develop Bayesian tests and assess Bayesian models by use of the posterior predictive distribution. The use of R to interface with WinBUGS, a popular MCMC computing language, is described with several illustrative examples.

This book is a suitable companion book for an introductory course on Bayesian methods. Also the book is valuable to the statistical practitioner who wishes to learn more about the R language and Bayesian methodology. The LearnBayes package, written by the author and available from the CRAN website, contains all of the R functions described in the book.

作者介绍:

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标签

R

Bayesian

贝叶斯

Statistics

统计

R语言

统计学

计算机科学

评论

其实就是在讲原理，所有的程序都是用package来演示的，于是如果要进行变型就没有参考。。。

:无

结合A first course in Bayesian Statistic mathods 简直完美

读过前面几章，不是特别好。讲解不如 A First Course in Bayesian Statistical Methods 清楚。

期末作业全靠它…

相比之下，R可能是最为普及的计算统计语言，这本薄薄的小册子是一个很好的开始。

读到一半，不错的text book。打算这两天宅着读完。不太熟悉R，书中的很多函数需要加载相应程序包以后才能运行

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书评

作者有点强推自己写的R包了，对bayesian的理论思想讲的不够清楚，适合有一定理论基础的同学看，学习如何实现MCMC，推荐先看Bayesian data analysis。
其实bayesian相比frequentist理论上要简单的多，无论是估计，检验，还是回归，无非就是先验，likelihood，后验的套路。

感觉超级好的textbook，虽然一直不习惯R，当时还是把书上的code跑了过半，感觉对理解bayesian超级有帮助。不像其他学科，初学bayesian应该一开始就和computer结合，不然真的很没趣。这本书没太多理论，提供大量操作，循序渐进，由简单到复杂，初学bayesian如果能结合这本书一起...

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