Bayesian Disease Mapping: Hierarchical Modeling in Spatial Epidemiology (Chapman Hall/CRC Interdisciplinary Statistics)

Andrew B. Lawson
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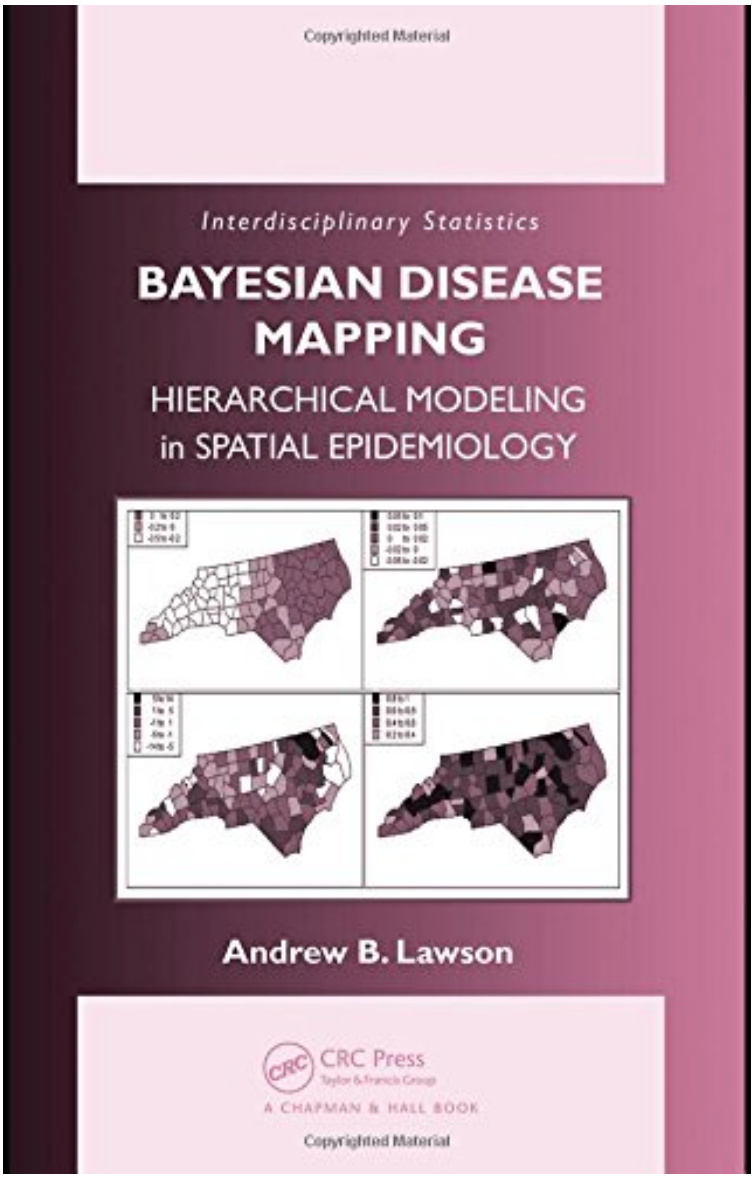

#3471601 in Books Chapman and Hall/CRC 2008-08-05Original language:EnglishPDF # 1 9.21 x .81 x 6.14l, 1.40 #File Name: 1584888407362 pages | File size: 38.Mb

Andrew B. Lawson : Bayesian Disease Mapping: Hierarchical Modeling in Spatial Epidemiology (Chapman Hall/CRC Interdisciplinary Statistics) before purchasing it in order to gage whether or not it would be worth my time, and all praised Bayesian Disease Mapping: Hierarchical Modeling in Spatial Epidemiology (Chapman Hall/CRC

Interdisciplinary Statistics):

1 of 2 people found the following review helpful. Interesting bookBy Jean VaillantThis book provides interesting elements about quantitative methods in epidemiology for master students or researchers. it is quite easy to read when you have some basic background in statistics. Nethetheless, the quality of the fonts is not the best, and there are some surprising typing errors even in early pages as the one about "list of tables". Plenty of relevant references on papers and useful softwares.

Focusing on data commonly found in public health databases and clinical settings, Bayesian Disease Mapping: Hierarchical Modeling in Spatial Epidemiology provides an overview of the main areas of Bayesian hierarchical modeling and its application to the geographical analysis of disease. The book explores a range of topics in Bayesian inference and modeling, including Markov chain Monte Carlo methods, Gibbs sampling, the MetropolisHastings algorithm, goodness-of-fit measures, and residual diagnostics. It also focuses on special topics, such as cluster detection; space-time modeling; and multivariate, survival, and longitudinal analyses. The author explains how to apply these methods to disease mapping using numerous real-world data sets pertaining to cancer, asthma, epilepsy, foot and mouth disease, influenza, and other diseases. In the appendices, he shows how R and WinBUGS can be useful tools in data manipulation and simulation. Applying Bayesian methods to the modeling of georeferenced health data, Bayesian Disease Mapping proves that the application of these approaches to biostatistical problems can yield important insights into data.

This book provides a technical grounding in spatial models while maintaining a strong grasp on applied epidemiological problems. A welcome effort is made to clarify concepts which might, in other texts, have been skimmed over in a rush to fit models. From the start, the concepts are illustrated with disease mapping examples, including R and WinBUGS code. The book has relatively few errors I recommend the book. It taught me new ideas and clarified existing ones. I shall continue to use it and I expect it to be useful for other statisticians with an interest in spatial analysis.Journal of the Royal Statistical Society, Series A, April 2011 The readers who would like to get a big picture of hierarchical modeling in spatial epidemiology in a quick fashion will find this book very useful. This book covers a range of topics in hierarchical modeling for spatial epidemiological data and provides a practical, comprehensive, and up-to-date overview of the use of spatial statistics in epidemiology. useful for readers to track down the topics of interests and see the varieties of up-to-date modeling techniques in spatial epidemiology or, more generally, spatial binary or count data. The author also lists the reference following each method for further information.Hongfei Li, Technometrics, November 2010 Lawson begins by building a solid Bayesian background The remaining seven chapters provide a thorough review of modeling relative risk Lawson provides well-written reviews of many topics and many aspects of those topics are covered in his reviews. The literature cited is huge and diverse, showing the current importance of the subjects covered. One can also gain hands-on training in analysis and visual presentations by following carefully the detailed introduction to R and WinBUGS given in the book. Many important data sets used in the book are available onlineInternational Statistical (2009), 77, 2 This book is an excellent reference for intermediate learners of Bayesian disease mapping many of the methodologies discussed in this book are applicable not only to spatial epidemiology but also to many other fields that utilize spatial data.J. Law, Biometrics, June 2009About the AuthorUniversity of South Carolina, Columbia, USA University of Kent, UK University of Copenhagen, Denmark Utrecht University, The Netherlands University of California, Berkeley, USA