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Titolo	Bayesian Essentials with R // by Jean-Michel Marin, Christian P. Robert
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Descrizione fisica	1 online resource (XIV, 296 p. 75 illus., 38 illus. in color.)
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Disciplina	519.5
Soggetti	Mathematical statistics - Data processing Statistics Statistics and Computing Statistical Theory and Methods
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references (pages 287-290) and index.
Nota di contenuto	User's Manual -- Normal Models -- Regression and Variable Selection -- Generalized Linear Models -- Capture-Recapture Experiments -- Mixture Models -- Time Series -- Image Analysis -- References -- Index.
Sommario/riassunto	This Bayesian modeling book provides a self-contained entry to computational Bayesian statistics. Focusing on the most standard statistical models and backed up by real datasets and an all-inclusive R (CRAN) package called bayess, the book provides an operational methodology for conducting Bayesian inference, rather than focusing on its theoretical and philosophical justifications. Readers are empowered to participate in the real-life data analysis situations depicted here from the beginning. The stakes are high and the reader determines the outcome. Special attention is paid to the derivation of prior distributions in each case and specific reference solutions are given for each of the models. Similarly, computational details are worked out to lead the reader towards an effective programming of the methods given in the book. In particular, all R codes are discussed with enough detail to make them readily understandable and expandable. This works in conjunction with the bayess package. Bayesian Essentials with R can be used as a textbook at both undergraduate and graduate

levels, as exemplified by courses given at Université Paris Dauphine (France), University of Canterbury (New Zealand), and University of British Columbia (Canada). It is particularly useful with students in professional degree programs and scientists to analyze data the Bayesian way. The text will also enhance introductory courses on Bayesian statistics. Prerequisites for the book are an undergraduate background in probability and statistics, if not in Bayesian statistics. A strength of the text is the noteworthy emphasis on the role of models in statistical analysis. This is the new, fully-revised edition to the book *Bayesian Core: A Practical Approach to Computational Bayesian Statistics*. .
