Bayesian Texts Reccomendations

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Tom

The text I use most these days is Gelman et al. (2013), the widely used Bayesian text for graduate courses. The book I used to get started writing code is McCarthy (2007). It is a great followup to this course. I also frequently refer to Gelman and Hill (2009). The best book for population and community ecologists in my view is Royle and Dorazio (2008). I also use code from Kéry and Schaub (2012) from time to time. My favorite text for understanding the complete data likelihood and finite population sampling is Link and Barker (2010). This is also the best source for learning reversible jump MCMC, which is needed for approximating the probability of the model. And of course, my all time favorite is Hobbs and Hooten (2015). Mevin and I will submit the manuscript for the second edition during the fall of 2021 (hope springs eternal).

Chris

The following books have been useful to me for learning Bayesian statistics. With the exception of the last one, all these books are geared towards practitioners with limited statistical training. First, of course, is Hobbs and Hooten (2015). The strengths of this book is its clarity and approachability as well as the self-contained nature of the material. McElreath (2020) (get the second edition) is a great complement to Hobbs and Hooten (2015), as it covers many topics outside of Hobbs and Hooten (2015) while teaching the overlapping material in a somewhat different way. I found that the differences between these two books aided my overall understanding of Bayesian statistics. Richard McElreath has made the course materials associated with McElreath (2020) available online. The lecture videos are informative and fun to watch. Gelman and Hill (2009) is a terrific resource with two caveats. The writing is quite terse and, as a result, can be somewhat opaque. Also, some of the

material is now a bit outdated. Nonetheless, for a lot of Bayesian modeling questions I can usually find guidance from this book. The recently published Gelman et al. (2020) is the first of two books that I believe are meant to be an update to Gelman and Hill (2009). I haven't had much time with this new book yet but I still would recommend it without reservation. My last recommendation is a bit aspirational. Gelman et al. (2013) (affectionally known as BDA3) is a fantastic book but is geared towards statistical students. My strategy has been to read chunks of BDA3 periodically as a litmus test of my understanding derived from all these other books. Aki Vehtari, one of the authors of BDA3, has made his Bayesian Data Analysis course course materials available online, which I found to be helpful for probing its depths.

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