BOOK REVIEW


This book aims to be an intermediate undergraduate level textbook with the goal of introducing students to the software package R while presenting basic probability and statistics, a goal they achieve.

The authors begin with a brief overview of the syntax of the R language supplemented with appendices and a good index. I would have called the index excellent if a few keywords were not omitted, but this can (almost) be forgiven given the sheer number of instructions presented. Their approach to this overview is the same as their approach with every subject covered in the text, namely, hands-on. They provide numerous example problems and just as many end-of-chapter exercises. In the latter chapters, complete case studies are also given. The examples are supported by a downloadable package containing multiple data sets. This package is quite welcome as it allows for the use of real-world (read: bigger) data sets without torturing the user into retyping them.

Some abstract examples are also presented, such as the famous birthday and Monty Hall problems. Here, I felt they missed a trick: these counterintuitive results are plainly stated. Although this does allow the lecturer, rather than the book, to provide the ‘exclamations of astonishment’, it does little to highlight the interesting nature of the results. For an undergraduate textbook, I would have expected the book to encourage the reader’s curiosity a bit more using such classical results.

The authors present the complete R source code for all the programs used in all the examples as well as the code used to generate every graphic. This enables students to immediately create presentation quality graphics. It does not distract in the smaller programs that all the programs are without comments, as the variable names are well chosen and the program flow is usually supplemented by the discussion preceding it, it is just in the longer programs where one can get a bit muddled. In the longer programs (more than a page), one needs to sometime refer back to the discussion preceding the program and I feel the authors should have made use of comments and added more whitespace to alleviate this need.

This book passed one of my most rigorous tests for readability: I was able to finish a more than a chapter in Moscow’s busy Domodedovo airport while waiting for a connecting flight. I found it to be an incredible easy read filled with many completely worked out examples and graphics. This book could well serve for a few courses of applied statistics or be used as a supplement to more general courses in statistics and probability.
I believe that authors have met their goals and have given us a very readable, useful book that can serve as both a motivated introduction to R and a hands-on introduction to probability and statistics. I would recommend this book to beginners wanting to learn statistics and R, statisticians wanting a review of the basics, and as a reference book for all.

Jacques A. Pienaar

North-West University, Potchefstroom, South Africa
jacques.pienaar@nwu.ac.za
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