Hands-On Programming With R: Write Your Own Functions And Simulations

Garrett Grolemund
Foreword by Hadley Wickham

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Synopsis

Learn how to program by diving into the R language, and then use your newfound skills to solve practical data science problems. With this book, you’ll learn how to load data, assemble and disassemble data objects, navigate R’s environment system, write your own functions, and use all of R’s programming tools. Rstudio Master Instructor Garrett Grolemund not only teaches you how to program, but also shows you how to get more from R than just visualizing and modeling data. You’ll gain valuable programming skills and support your work as a data scientist at the same time. Work hands-on with three practical data analysis projects based on casino games: Store, retrieve, and change data values in your computer’s memory; Write programs and simulations that outperform those written by typical R users; Use R programming tools such as if else statements, for loops, and S3 classes; Learn how to write lightning-fast vectorized R code; Take advantage of R’s package system and debugging tools; Practice and apply R programming concepts as you learn them

Book Information

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Customer Reviews

Full disclosure - I have worked with the author. I have considered him a friend and colleague since he taught a course at my employer. Part of the information in my review is based on conversations I have had with the author, so please discount my opinion accordingly. I don’t think this book is meant to be a competitor to Norman Matloff’s book (which I consider *the* tutorial/reference for base R). This book is trying to do something different, and I think it’s an ambitious experiment.
years, there has been a lot of activity surrounding the "Hadleyverse", a collection of R packages architected by Hadley Wickham and coworkers, the goal of which is to offer the user a consistent, simple, yet powerful set of tools to tidy, transform, and visualize data. The best way to jump into the Hadleyverse has been to just jump in. For someone who has just taken the leap to learn base R, it can be difficult to consider taking that second leap. There hasn't been a book (as least to my knowledge) that says, "start here, here's how to learn R in a way leads to dplyr". I think that's a goal of this book. For example, knowing how functions work will make it easier to work with the piping operator (%>%). Knowing how environments work will make it easier to navigate the vagaries of non-standard evaluation, to get the most out of dplyr and ggvis. I don't think these topics were chosen by accident. Part of my job is to help R users in my company, particularly those who are just starting out with the language. I will gladly recommend this book to them because: (1) it reveals to the reader just a little at a time, which is ideal for someone just starting out with R, (2) what is covered in the book is complementary to learning dplyr, etc.

Garrett’s book is exactly what I was looking for. Having some background in other languages, including some C++ and having just gone through Learning Python, I needed to get up to speed on R. The book is concise and well structured. The theme of the book, casino games, uses dice, cards, and a slot machine to systematically build up the complexity of what you can do in R. This cohesiveness helps to reinforce what you learned previously while better understanding the new topic. The depth into each topic was what I was hoping and expecting. You learn the structure and enough of the nuts and bolts that you can go look up more when necessary without it being too much to absorb at once. Garrett refers to websites and other books that have this detailed information that goes beyond the scope of this book. The focus of the book is obvious from the title. Garrett approaches R like a programmer. I found this focus to be better for me than the first book on R that I read, Jared Lander’s "R for Everyone: Advanced Analytics and Graphics". Jared’s book goes into much more complicated statistics, but misses some of the fundamentals that made it difficult for me to understand later parts of the book. Garrett’s approach, however, ensures you build up your base before moving on. If your background is more programming than stats, I think you should strongly consider Hand-On Programming with R. The main problem I had with the book were related to formatting and editorial issues. Many of the problems are listed in the Errata, so hopefully this gets fixed. In some cases the output did not match what would be expected. In one case, a code example did not run as written, and needed a small change. Without these issues I would have gone with five stars.
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