R Resources

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Last edited: **1 May 2020**

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Intro

A list of resources I have found helpful over the years. I use most of the items here regularly and have each of them bookmarked.

I wouldn't consider myself an expert in R by any means so this might not be useful for those who already have a lot of experience.

Dipping your toes

When learning something new a bit of hand-holding can go a long way. For example, when I get to a new city with an unfamiliar bus or train system, I will often avoid using that mode of transportation until I've gone on it at least once with a local, just to see how it works - do you pay on the train or before your board? Is change provided? Do you tap in *and* out or just in or just out? Typically all I need is one guided trip.

If this resonates at all with you, here are two particularly good resources to show you the ropes:

- **Swirl Stats** (link) gets you started with R *within* R. The lessons are quick to get through and will help flatten the learning curve
- **Markdown Tutorial** (link) does something similar to teach you Markdown. This isn't R per se, but within 10 minutes you'll learn the basics of Markdown syntax which can then be used together with R to create clean, reproducible documents.

Programming & Statistics

- ***Discovering Statistics Using R* by Andy Field, Jeremy Miles, and Zoe Field** (Amazon.com link) has been my go-to book since I started using R in 2014 and I continue to refer back to it to this day both for basic. One downside is that some of the packages are a bit outdated.
- ***R for Data Science* by Garrett Grolemund and Hadley Wickham** (link) is worth reading basically end-to-end for anyone using R for data analysis. This book goes through the basics of importing, cleaning, transforming, and visualizing data.

Data Visualization

- ***R Graphics Cookbook, 2nd Edition* by Winston Chang** (https://r-graphics.org/) - This book has over 150 'recipes' for the most common graphs. Consider this a menu of options; for example, if you know you want a histogram or a box plot, just jump to the relevant chapter and you'll find a template for it.
- **ggplot2 reference** (https://ggplot2.tidyverse.org/reference/) - `ggplot2` is a package used for building graphs in R. It works by layering differnt components on top of each other. This website provides a reference list for most components and examples of how to use each. I usually use it when I have something in mind that I want to do, such as changing the scales on the y-axis.
- ***ggplot2: Elegant Graphics for Data Analysis* by Hadley Wickham** (https://ggplot2-book.org/) - this is a shorter book, that basically gets you started with `ggplot2`. If you're new to R or new to ggplot2, I'd skim through through this.

File Management and Sharing

- ***Happy Git and Github for the userR* by Jenny Bryan, the STAT 545 TAs, and Jim Hester** (https://happygitwithr.com/) - I used this to get setup with Git and Github. Neither are very intuitive to use, in my opinion, but incredibly valuable for organizing and storing files. It takes a couple hours to get through and set things up but you will thank yourself for doing this sooner rather than later.

Miscellaneous

- **RStudio Cheatsheets** (https://rstudio.com/resources/cheatsheets/) - There are literally dozens of cheatsheets here. I've downloaded many of them and open at least one of them up every time I use R. If you believe in the 80/20 rule, these cheatsheets will cover the 80% of things you need to know under each topic.
- **stargazer** (https://www.jakeruss.com/cheatsheets/stargazer/) - I've been using the `stargzer` package to generate tables in R, specifically regression tables. This is a fairly extensive resource for this package.