

R Resources

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Here are some general resources for learning R, finding help with R, and expanding your R skills. We will cover the basics in this class, but we have a limited amount of time this semester and these will be useful for further study. R can be overwhelming at first, but I've found that the best way to learn R was having to use it in real data analyses. Don't be afraid to play around with R.

This is not an official endorsement of these sites by Rollins or anything like that. They are just sites and articles that I have found useful/think may be useful.

Google

I use Google a ton while I'm using R. If you are experiencing an error, people have likely seen the same thing before. For information about effective googling as a programmer, see this link:

- <https://medium.com/@niamhpower/how-to-google-effectively-as-a-developer-4ebe363afe>

If any of these websites come up in my Google searches, I prefer to check out their answers first:

- <https://stackoverflow.com/>
- <https://cran.r-project.org/>
- <https://community.rstudio.com/>
- <https://www.r-bloggers.com/>

Tutorials

Type `help.start()` in R and you will open up the R documentation and some built-in tutorials. I think this would be most helpful for people who have been exposed to some programming concepts before.

This documentation is the same thing, just online:

- <https://cran.r-project.org/doc/manuals/r-release/R-intro.html>

I have heard good things about the free tutorials on datacamp and swirlstats, and I think they are good if you have not programmed before.

- <https://www.datacamp.com/courses/free-introduction-to-r>
- <https://swirlstats.com/>

This short tutorial covers the basics pretty quickly:

- <https://www.burns-stat.com/documents/tutorials/impatient-r/>

The author also has a fun document outlining some reasons why R is great:

- <https://www.burns-stat.com/documents/tutorials/why-use-the-r-language/>

Textbooks

This book, R Programming for Data Science, is freely available online and is very thorough. It is focused on programming concepts.

- <https://bookdown.org/rdpeng/rprogdatascience/>

You are able to access a free online version of this textbook (R in Action). It may be useful for exercises and reference:

- <https://www.manning.com/books/r-in-action-second-edition#toc>

Graphs and Plots

ggplot2 is a popular R package that can make beautiful graphs and plots. Because of its flexibility, it can also be fairly complicated. This is a comprehensive tutorial on how to use ggplot2:

- <http://r-statistics.co/Complete-Ggplot2-Tutorial-Part1-With-R-Code.html>

RMarkdown

RMarkdown is a package for R which lets you make markdown documents. These documents let you write regular paragraphs, then put in “chunks” of R code or mathematical equations. Then, you can output them as .html, .pdf, and Microsoft Word files. They make it easy to present research and explain your R code. This document was made in RMarkdown.

The setup can be a little complicated, so if you can't get RMarkdown working, don't worry about it and just make sure to keep putting a lot of comments in your regular R code.

- <https://rmarkdown.rstudio.com/lesson-1.html>
- <https://bookdown.org/yihui/rmarkdown/>

Cheat Sheets

Here are some useful cheat sheets. If you are looking for more, there are a lot of really nice cheat sheets here:

- <https://rstudio.com/resources/cheatsheets/>

Here are some specific cheat sheets for some of the things that were in this document:

- R cheat sheet: <https://rstudio.com/wp-content/uploads/2016/10/r-cheat-sheet-3.pdf>
- ggplot2 cheat sheet: <https://rstudio.com/wp-content/uploads/2015/03/ggplot2-cheatsheet.pdf>
- Rmarkdown cheat sheet: <https://rstudio.com/wp-content/uploads/2015/02/rmarkdown-cheatsheet.pdf>