SummR Syllabus

Summer 2019

Instructor Information

Instructor	Email	Office Location
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General Information

Description

A foundation in organizing your R projects and combatting informal practices. Introduction and exploration of Open Science within a Clinical/Community framework. Becoming comfortable with R & R-Studio

Goals

- Introduce R & R-Studio basics so that everyone is comfortable working with the program and that we have a common language moving forward
- Familiarity with effective strategies and practices for organizing research projects within R. The focus will revolve around promoting Open Science practices as they apply to own interests. I will introduce a workflow within R that will maximize reproducibility and attempt to future proof analyses (take that future Dustin!).

Expectations

Commitment to learning including regular attendance as a lot of things we will speak about will build upon one another

Workshop Structure

The workshop will begin with an introduction to R. Once there is familiarity, we will move to broader structures to develop more efficient workflow within R (using Projects and integration with GitHub). This will take place in the context of interactive examples of data manipulation and visualization with sample data. Once this is established, the workshop will shift to more small groups focused and use the weekly TidyTuesday as a template. This will also be times for individuals to bring in their own projects and have others help.

Course Materials

Required Materials

• Computer
• R & R-Studio (will set-up during class)
• OSF account (will register in class)
• GitHub account (will register in class)
• GitHub Desktop
• Laughter (WARNING: Instructor will make lame dad jokes)
• Curiosity
• Coffee

Optional Materials

• Light Saber
• Elder Wand
• T.A.R.D.I.S./Sonic Screwdriver
• DeLorean
• One Ring to Rule Them All

Course Website

The website and all associated materials will be housed on GitHub, OSF or Google Drive

SummR GitHub

Additional Resources (Updated Periodically)

Recommended Text

R for Data Science **(free)**

>   *Hadley Wickham*

R Markdown: The Definitive Guide **(free)**

>   *Yihui Xie, J. J. Allaire, Garrett Grolemund*

Advanced R

>   *Hadley Wickham*

The Seven Deadly Sins of Psychology: A Manifesto for Reforming the Culture of Scientific Practice

>   *Chris Chambers* (check it out from the library & give it a read when you can)

Course Topics

- These are organized in sequential order. Since I would like to move at the pace of the class and demand of those in the class, I will not include dates.

Introductions Installing R-Studio and customizing it to yourself and reporoducibility Creating Logins
Creating a Project Console vs. Scripts vs. Markdown knitr and R-Markdown and endless possibilities
Importing Data The Tidyverse Manipulating Data Visualization part 1
Visualization part 2 Sharing projects with others → is it reproducible?
Knitting the document papaja, xtable, stargazer and SjPlot (You can do what with R?!)
Tidy Tuesday