

Project Management

- Understand motivation for code and data management
- Know how to organize code, data, and results
- Know the basics of file paths and directory structures
- Be able to create and use an RStudio project

Working Directory and File Paths

Working directory

- R needs to know where you are within your computer, which is referred to as the *working directory*
- R will think of everything in your computer as located relative to your working directory
- You automatically set the working directory to the folder containing the .RProject file

File paths

- the text that says where a file is located and the backslash indicates a different level
- two type: absolute and relative
 - can use `getwd()` to find absolute
 - shortcut `~` to create a relative path
 - * ie “~/data/datafile.csv”

```
#getwd()  
#setwd()
```

Code and Data organization

- A good project layout will ultimately make your life easier

Best Practices

1. Treat raw data as read only
2. Treat generated output as disposable
 - ideal to have a separate folder for each output type
 - **data:** Ideally .csv files as these are flat, transparent, and universal. You may have other specialized formats as well. .rda and .rds are R-specific data files but you never *need* to use these.
 - **code (or script):** .R files, perhaps .do files if Stata is your thing, .py files for Python, etc.
 - **results:** .png or .pdf files for plots; .tex or .txt files for tables
 - **papers:** .tex if you write in LaTeX, .doc for Word, .Rmd for RMarkdown, and .pdf or .html rendered documents.

RStudio Projects

RStudio uses the .Rproj file to help keep everything organized in a self-contained, reproducible package

Helpful folders: data, data__output, documents, fig__output, scripts

Show example of how to create a folder

Challenge

(open up R-DAVIS website & read challenge)