

What I hope you take away

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# The big ideas

To manage your project, manage your files

Understand your data

Explore data with visualizations

Be guided by the rhetorical situation

Design the final document

## To manage your project, manage your files

- ▶ Establish an organization scheme and stick to it
- ▶ Keep scripts short ( $< 100$  lines) and do one thing
- ▶ data directory for data files and R scripts that tidy them
- ▶ design directory for scripts to turn data into visuals
- ▶ visuals directory to receive the graphs
- ▶ portfolio directory for Rmd scripts to commingle source() and prose

# Understand your data

- ▶ **Acquiring** data (recommended links)
- ▶ Data **structure** is the number and type of variables
- ▶ **Understand** your data structure to make it tidy
- ▶ If your data aren't **tidy**, you severely limit your ability to explore the data graphically.
- ▶ Recall, the first argument of `ggplot()` is a tidy data frame

# Explore data with visualizations

- ▶ Once you understand the data, sketch design ideas (no code)
- ▶ 15 graphs about 1 thing
- ▶ When learning from prior art, start with small data sets that you fully comprehend
- ▶ When learning from prior art (or tutorials), write, execute, and comprehend each line of code one line at a time
- ▶ Iterate with aesthetics and geoms using the same tidy data structure

# Be guided by the rhetorical situation

- ▶ Explore possible stories
- ▶ Understand your audience
- ▶ Judiciously apply relevant design principles
- ▶ Tell the important story for that audience

Design your final document