Goals for today:

* Practice using git
  + Make an R script using data stored on github
  + Upload it to a folder on github
  + Make an edit
  + Commit the edit
* Plot a timeseries in R
* Discuss R Markdown and Quarto
  + Upload a report with a graph on github

Plotting a timeseries in R

* Read.csv
* Use as.POSIXct() / strptime() function
* plot()
* Accessing help in rstudio

Rmarkdown

* Resource: <https://rmarkdown.rstudio.com/lesson-2.html>
* Notebook interface
* The file contains three types of content:
* An (optional) YAML header surrounded by ---s
* R code chunks surrounded by ```s
* text mixed with simple text formatting
* .Rmd

Quarto

* The “new” markdown (.Qmd)
* Getting started: <https://quarto.org/docs/get-started/authoring/rstudio.html>
  + Latest release of Rstudio, knitr package installed
  + File > New File > Quarto Document…
* Resource: <https://quarto.org/docs/get-started/hello/rstudio.html>
* Switching between Visual and Source
* The YAML header specifies the type of document rendered (HTML, word, pdf)
* Code chunks
  + Code chunk label
  + Exclude code from rendered document (include: false)
* Markdown text
  + Can be edited in the visual editor, so no knowledge of syntax is needed. (yay!)
* Resource: <https://quarto.org/docs/get-started/computations/rstudio.html>
  + Knitr options for display of code upon rendering
    - <https://quarto.org/docs/reference/cells/cells-knitr.html>
      * Include: false
      * Echo: false
      * Warning: false
  + Code-fold
    - Global setting
      * Within yaml header, html options, code-fold:true
  + Figure/section links
  + Text that includes calculations
    - Ex. There are `r nrow(mpg)` observations in our data.

Other ways to run R code:

* Jupyter notebook
  + Can be used to run in notebook format
  + Not all R packages can be used, but there is a process to request to add packages to Jupyter / anaconda
  + Can run R and Python
* VScode (visual studio code)
  + Not to be confused with visual studio
  + Like RStudio, but also runs Python