* Resources:
  + DataCamp: <https://www.datacamp.com/courses/free-introduction-to-r>
  + Coursera: <https://www.coursera.org/specializations/jhu-data-science>
  + UPenn MUSA: <https://github.com/MUSA-620-Spring-2018/course-materials>
  + Cheat sheets: <https://rstudio.com/resources/cheatsheets/>
  + Geospatial: <https://bookdown.org/robinlovelace/geocompr/spatial-operations.html>
* R
  + <https://www.r-project.org/>
  + CRAN Mirror: Cloud
  + Base
* R Studio
  + <https://rstudio.com/products/rstudio/download/#download>
  + Script
  + Console
  + Environment
  + Help/plot
* Packages
  + dplyr: data manipulation
  + stringr: dealing with text
  + lubridate: dealing with datetime
  + ggplot2: data visualization
  + plotly: interactive viz
  + sf: geospatial
  + tidyverse: a suite of common packages including dplyr, ggplot2, etc.
* Basics
  + Library
  + Help
  + Comment
  + Setwd and getwd –to set up or view the working directory
  + Assign value to variable
  + Read data
  + Structure
  + Slicing
  + Filtering
  + Select columns
  + Create column
  + Piping
  + Group by and summarize
  + Join
  + For loop
  + If else
  + Write data
  + Formatting
* Geospatial
  + sf
    - Create simple feature
    - Read shapefile
    - Projection
    - Spatial join
* Visualization
  + ggplot2
    - <https://r4ds.had.co.nz/data-visualisation.html>
    - <https://github.com/rstudio/cheatsheets/blob/master/data-visualization-2.1.pdf>
  + plotly (<https://plotly.com/r/>)
    - <https://plotly.com/ggplot2/>
    - <https://images.plot.ly/plotly-documentation/images/r_cheat_sheet.pdf?_ga=2.128874572.1192824718.1613578889-1527689438.1612974914>
    - <https://plotly-r.com>
    - <https://plotly.com/r/reference/index/>
* Database
  + PostGIS
  + Sqlite
* RMarkdown
* RShiny
* Tips
  + Read data
  + Chunks
  + Subset