Statistics 305/605: Introduction to Biostatistical Methods for Health Sciences

Getting Started with RStudio

Brad McNeney

The Stat Workshop

- Workshop hours and location.
    - BM office hours are Wed 11:00-noon in the Workshop.

Getting Started with RStudio

- In Stat305/605,
  - software demos will be in **RStudio**
    - RStudio allows you to better organize your work in R.
  - exercise templates will be in **R Markdown**
    - R Markdown documents allow you to integrate your written comments with R commands and their output.

What is RStudio?

- ▶ RStudio is a free "integrated development environment" (IDE) for R.
- ▶ Basically it is an interface that makes it easier to work with R and get organized on your computer.

What is R Markdown?

- ▶ R Markdown is a file format for making documents with R.
- ▶ An R Markdown document is written in markdown, a simple plain text format, and allows you to integrate chunks of embedded R commands as well as their output.
- ▶ R Markdown allows you to author documents in file formats such as PDF, Word and HTML.
- ▶ The R-Markdown document interface is available in RStudio. (For Jupyter users, an R Markdown document is like a Jupyter Notebook.)

Getting-Started Videos

- Below are links to short videos to give a flavour of RStudio and R Markdown:
- Katie Ann Jager on "Getting Started with RStudio" (time 8:53)
  https://www.youtube.com/watch?v=ikGdOt1WJyo
- Roger Marin on "Installing R and R Studio" (time 4:53)
  https://www.youtube.com/watch?v=cX532N_XLIs and "What is R Studio" (time 5:20)
  https://www.youtube.com/watch?v=riONFzJdXcs
- Roger Peng on "R Markdown with RStudio" (time 6:38)
  https://www.youtube.com/watch?v=DNS7i2m4sB0
- Nicolas Horton on "First steps with R Markdown" (time 3:49)
  https://www.youtube.com/watch?v=w4hLT7WyjnM
- Watch these on your own.

R Resources on the Course Canvas Page

- This overview on R/RStudio options for the course.
- Note that the overview links to material on getting started in R/RStudio.

Example R Markdown File

- After installing R, RStudio and the tidyverse, install the `gapminder` package.
- Exercise: Make sure you can "knit" the `example.Rmd` RMarkdown document in the getting started folder of R tutorials.