

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

Getting Started with RStudio

Jinko Graham

Announcements

- ▶ SFU International poster
- ▶ Audio-lectures problem for Stats
 - ▶ Last week, **all** Stats audio files, including ours, were **empty**.
 - ▶ Malfunction at SFU IT services.
 - ▶ Working on it but they're overloaded and may be slow to fix.
- ▶ All emails to class list from last week are now posted on Canvas under link for Materials
- ▶ Workshop drop-in sessions for R on their Canvas site
 - ▶ You can bring your own computer to get help with installation of R/RStudio.
- ▶ Workshop hours and temporary location until renos completed.
 - ▶ Renos should be finished end of Sept/mid-Oct. Marie Loughin, Workshop coordinator, will let us know.
 - ▶ JG office hours (Weds, 1:30-2:20pm) in temp Workshop until renos complete. Move to permanent location once renos done.

Getting Started with RStudio

- ▶ In Stat305/605,
 - ▶ software demos will be in **RStudio**
 - ▶ RStudio allows you to better organize your work in R.
 - ▶ homework 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 short videos to give a flavour of RStudio and R Markdown:
 1. Katie Ann Jager on “Getting Started with RStudio” (time 8:53)
 - ▶ For better viewing in SWH 100081, replace with Roger Marin on “Installing R and R Studio” (time 4:53) and “What is R Studio” (time 5:20).
 2. Roger Peng on “R Markdown with RStudio” (time 6:38)
 3. Nicolas Horton on “First steps with R Markdown” (time 3:49)
- ▶ We'll watch these today.
- ▶ Then I'll show you where to go on the course Canvas page to find the associated written instructions.

1. Katie Ann Jager on “Getting Started with RStudio”

- ▶ Better to watch on your own computer (time 8:53)
 - ▶ Doesn't project well in SWH 100081
 - ▶ Find at <https://www.youtube.com/watch?v=ikGdOt1WJyo>
- ▶ To download RStudio, Katie says to go the Canvas page for her class. Instead go to <https://www.rstudio.com/> and download from the first column that says “RStudio Desktop, Open source license”. Don't forget to download R first; e.g, on the download page, find the line “RStudio requires R 3.0.1+. If you don't already have R, download it here” and follow the link.
- ▶ Instead of Katie's intro, show Mike Marin's:
 - ▶ Installing R and RStudio (time 4:53).
 - ▶ What is RStudio (time 5:20).

2. Roger Peng on “R Markdown with RStudio” (time 6:38)
3. Nicolas Horton on “First steps with R Markdown” (time 3:49)

Also can consult the written resources posted on our class Canvas page. For example,

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