

Resources for installing R & RStudio & getting started

Many of the biostatistics courses in the SPH are taught using the statistical computing software R, and within the application RStudio. Below are links for downloading these programs, as well as resources to help get you started in learning how to use them.

Please make sure you have both R and RStudio installed on the first day of BSTA 526 so that you can follow along in class.

1. Install R and RStudio
 - a. R and RStudio are two separate programs. You must install R first. Then install Rstudio desktop. Even if you have R installed already, we highly recommend installing the latest version if it has been a while since you installed it.
 - b. Install **R** (first)
 - i. Windows: Download from <https://cran.rstudio.com/bin/windows/base/> from the link "Download R 4.1.1 for Windows"
 - ii. Mac OS X: Download the latest .pkg file (top link, currently R-4.1.1.pkg) from <https://cran.rstudio.com/bin/macosx/>
 - c. Install **RStudio Desktop** Open Source License (second)
 - i. Select download file corresponding to your operating system from <https://posit.co/download/rstudio-desktop/#download>
 - d. Prefer tutorials or videos? Check out these:
 - i. Tutorial on downloading R and RStudio: <https://learnr-examples.shinyapps.io/ex-setup-r/>
 - ii. OpenIntroOrg's YouTube video: <https://www.youtube.com/playlist?list=PLklseIvEzpM73U-0ONpe7eHp2WCultVWQ>
 - iii. Installing R and RStudio on your own pc: <https://www.youtube.com/watch?v=kOQDdJZ7HI4>
2. Get started with R and RStudio
 - a. **Highly recommend: Introduction to R and RStudio for Exploratory Data Analysis workshops**
 - i. These workshops were created for new BSTA 511 students in Fall 2020.
 - **New Fall 2023:**
 - a. The workshops below use RMarkdown to create reproducible reports (see part 1 slides 22-31).
 - b. This year we will be switching to using **Quarto** for reproducible reports. The way it works is very similar though and so learning how to create RMarkdown files will still be helpful.
 - ii. Slides Part 1
 - html: https://jminnier-berd-r-courses.netlify.app/01-intro-r-eda/01_intro_r_eda_part1.html#1
 - pdf: https://jminnier-berd-r-courses.netlify.app/01-intro-r-eda/01_intro_r_eda_part1.pdf
 - iii. Slides Part 2

- html: https://jminnier-berd-r-courses.netlify.app/01-intro-r-eda/01_intro_r_eda_part2.html#1
- pdf: https://jminnier-berd-r-courses.netlify.app/01-intro-r-eda/01_intro_r_eda_part2.pdf

iv. Recordings

- Part 1a: <https://echo360.org/media/b9bb7e08-8cf4-4f04-84a8-3236f89a3281/public>
- Part1b: <https://echo360.org/media/955bbbb1-4953-40f1-b769-f53afff40b20/public>
- Part2: <https://echo360.org/media/04d4ec82-35a6-43b2-8463-2db51f936c6d/public>

- b. RStudio tutorials (don't need R on your own computer to run these):
<https://posit.cloud/learn/primers>
- c. RYouWithMe is a series of videos showing how to use R, created by R-Ladies Sydney
- <https://rladiessydney.org/courses/ryouwithme/>
 - Tour of RStudio in the BasicBasics section.
 - The other sections go into data wrangling (CleanItUp), data visualization (VizWhiz), and Markdown (MarkyMark).
- d. R bootcamp: <https://r-bootcamp.netlify.com/>