Setup

Downloading R and Rstudio

Mac Users

To Install R

Open an internet browser and go to www.r-project.org. Click the "download R" link in the middle of the page. Select a CRAN location (a mirror site) and click the corresponding link. Click on the "Download R for (Mac) OS X" link at the top of the page. Click on the file containing the latest version of R under "Files." Save the .pkg file, double-click it to open, and follow the installation instructions. Now that R is installed, you need to download and install RStudio.

To Install RStudio

Go to www.rstudio.com and click on the "Download RStudio" button. Click on "Download RStudio Desktop." Click on the version recommended for your system, or the latest Mac version, save the .dmg file on your computer, double-click it to open, and then drag and drop it to your applications folder.

Windows Users

To Install R:

Open an internet browser and go to www.r-project.org. Click the "download R" link in the middle of the page. Select a CRAN location (a mirror site) and click the corresponding link.
Click on the "Download R for Windows" link at the top of the page.
Click on the "install R for the first time" link at the top of the page. Click "Download R for Windows" and save the executable file somewhere on your computer. Run the .exe file and follow the installation instructions. Now that R is installed, you need to download and install RStudio.

To Install RStudio

Go to www.rstudio.com and click on the "Download RStudio" button. Click on "Download RStudio Desktop." Click on the version recommended for your system, or the latest Windows version, and save the executable file. Run the .exe file and follow the installation instructions.

Updating R (if you have previously installed it)

The most recent R version is v 4.0.3. If you have downloaded R in the past few years, make sure you have an updated version.

Windows Users try using the package installr (only for Windows) Install and load installr: install.packages("installr") and library(installr) Call updateR() function. This will start the updating process of your R installation by: "finding the latest R version, downloading it, running the installer, deleting the installation file, copy and updating old packages to the new R installation." From within RStudio, go to Help > Check for Updates to install newer version of RStudio (if available, optional).

Mac Users you can simply download and install the newest version of R. When you restart RStudio, it will use the updated version of R.

Go to https://cloud.r-project.org/bin/macosx/ Click the link "R-4.0.3.pkg" When the file finishes downloading, double-click to install. You should be able to click "Next" to all dialogs to finish the installation. From within RStudio, go to Help > Check for Updates to install newer version of RStudio (if available, optional).

Installing Git

I will be uploading all the labs and datasets to a GitHub repository. To access this repository locally, you should install Git (but you can also download the files, manually). Git is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency. If there's any chance you have installed Git already, verify that and skip this step. Otherwise, find installation instructions below for your operating system.

Windows Users Install Git for Windows, also known as `msysgit` or "Git Bash", to get Git in addition to some other useful tools, such as the Bash shell. * Note that RStudio for Windows prefers for Git to be installed below `C:/Program Files` and this appears to be the default. This implies, for example, that the Git executable on my Windows system is found at `C:/Program Files/Git/bin/git.exe`. Unless you have specific reasons to otherwise, follow this convention.

Mac Users Install Git from here: http://git-scm.com/downloads.

- This arguably sets you up the best for the future. It will certainly get you the latest version of Git of all approaches described here.
- The GitHub home for the macOS installer is here: https://github.com/timcharper/git_osx_installer.
  - At that link, you can find more info if something goes wrong or you are working on an old version of macOS.

Introduction to RStudio

In this course we will be learning how to code in R inside the RStudio interface. You may be wondering the difference between the two.

R is a statistical computing language that allows you to: * Store data in a variety of formats * Perform calculations on data and variables, * Build functions and applications, and * Transform and graphically represent data

RStudio is an Integrated Development Environment (IDE) for statistical computing. It is a platform for using and coding in R.

Before we continue, please watch this 8 minute video introducing you to the RStudio Environment https://www.youtube.com/embed/TJmNvfhLCoI/

Connecting RStudio to the course's GitHub reppository

File > New Project > Version Control > Git. In "Repository URL", paste the URL of our course's GitHub repository https://github.com/aponce278/STS-115-2021 Accept the default project directory name, e.g. myrepo, which coincides with the GitHub repo name. Take charge of where the Project will be saved locally. Click "Create Project". You should find yourself in a new local RStudio Project that represents the course's repo on GitHub.

Now, open lab 1, where you will find further instructions. In Rstudio, you can find the RDM file on the lower right panel. Double click.