

Computer Software Setup

Please complete these 2 main tasks before our first class:

1. Install *current* **R** on your laptop
2. Install *current* **RStudio** on your laptop

Read below for more detailed information on installing the pieces of software we'll need, and platform specific instructions.

R & RStudio

R and **RStudio** are separate downloads and installations. **R** is the underlying statistical computing environment. **RStudio** is a graphical integrated development environment (IDE) that makes using R much easier and more interactive. You need to install R before you install **RStudio**. Download and install both of these but in this order:

1. **R**: Get the most current version appropriate for your machine. It's free.
2. **RStudio** is a great platform to work with R (note you need R before you can use RStudio). Please install the most recent version. It's free. It does lots of cool things. We'll talk more about it in class.

Windows

If you already have R and RStudio installed

- Open **RStudio**, and click on *Help > Check for updates*. If a new version is available, quit **RStudio**, and download the latest version for **RStudio**.
- To check which version of **R** you are using, start **RStudio** and the first thing that appears in the console indicates the version of **R** you are running. Alternatively, you can type `sessionInfo()`, which will also display which version of **R** you are running. Go on the CRAN website and check whether a more recent version is available. If so, please download and install it. You can check here for more information on how to remove old versions from your system if you wish to do so.

If you don't have R and RStudio installed

- Download **R** from the CRAN website.
- Run the `.exe` file that was just downloaded
- Go to the **RStudio** download page
- Under *Installers* select **RStudio x.yy.zzz - Windows XP/Vista/7/8** (where x, y, and z represent version numbers)
- Double click the file to install it
- Once it's installed, open **RStudio** to make sure it works and you don't get any error messages.

macOS

If you already have R and RStudio installed

- Open **RStudio**, and click on "Help" > "Check for updates". If a new version is available, quit **RStudio**, and download the latest version for **RStudio**.

- To check the version of R you are using, start **RStudio** and the first thing that appears on the terminal indicates the version of R you are running. Alternatively, you can type `sessionInfo()`, which will also display which version of R you are running. Go on the CRAN website and check whether a more recent version is available. If so, please download and install it.

If you don't have R and RStudio installed

- Download R from the CRAN website.
- Select the `.pkg` file for the latest R version
- Double click on the downloaded file to install R
- It is also a good idea to install XQuartz (needed by some packages)
- Go to the RStudio download page
- Under *Installers* select **RStudio x.yy.zzz - Mac OS X 10.6+ (64-bit)** (where x, y, and z represent version numbers)
- Double click the file to install **RStudio**
- Once it's installed, open **RStudio** to make sure it works and you don't get any error messages.

Linux

- Follow the instructions for your distribution from CRAN, they provide information to get the most recent version of R for common distributions. For most distributions, you could use your package manager (e.g., for Debian/Ubuntu run `sudo apt-get install r-base`, and for Fedora `sudo yum install R`), but we don't recommend this approach as the versions provided by this are usually out of date. In any case, make sure you have at least **R 3.4.3**
- Go to the RStudio download page
- Under *Installers* select the version that matches your distribution, and install it with your preferred method (e.g., with Debian/Ubuntu `sudo dpkg -i rstudio-x.yy.zzz-amd64.deb` at the terminal).
- Once it's installed, open **RStudio** to make sure it works and you don't get any error messages.