**Installing R and RStudio**

*Step 1: Install R*

1. Visit [the official R project website](https://cran.r-project.org/).
2. Choose the appropriate download link for your operating system:
   1. **Windows:** Click on "Download R for Windows," then "base," and finally "Download R 4.x.x for Windows."
   2. **macOS:** Click on "Download R for macOS," then select the version that matches your macOS version.
      1. If you don’t know what macOS version you have, you can find out by clicking the Apple icon in the top-left corner of your screen and selecting About This Mac from the dropdown menu.
3. Follow the installation instructions for your platform:
   1. **Windows**: Run the .exe installer and follow the on-screen prompts. You can leave all default settings as they are.
   2. **macOS**: Open the downloaded .pkg file and follow the prompts to install R.
4. (Optional/advanced) If you’d like to access R from the terminal, you can add the bin directory inside the folder that you installed R to to your system’s PATH environment variable.
   1. After doing so, you should be able to open Terminal/Command Prompt and type R to start an R session. To exit, type q() and hit Enter.

*Step 2: Install RStudio*

1. Visit [the RStudio download page](https://posit.co/downloads/) on the posit website.
2. Scroll down and choose the **RStudio Desktop Free** version.
3. Download the appropriate installer for your operating system (should be selected automatically).
4. Run the installer and follow the on-screen instructions:
   1. **Windows**: Double-click the .exe file and follow the installation prompts.
   2. **macOS**: Open the .dmg file and drag the RStudio icon into your Applications folder.
5. Once installed, launch RStudio. It will automatically detect your R installation. You can now start writing and running R code within RStudio!

*Step 3: Install essential R packages*

1. Open RStudio.
2. In the R console (left window), run the following command to install some basic packages: install.packages(c("tidyverse", "ggplot2", "dplyr"))
3. Follow the on-screen prompts to complete the package installation.

*Step 4: Verify your installation*

1. Create a new R script (File>New File>R Script).
2. In the R script editor (the top-left window), type the following code:
   1. library(ggplot2)a
   2. data(mpg)s
   3. ggplot(mpg, aes(x=displ, y=hwy)) + geom\_point()d
3. Run the code by clicking the "Run" button or pressing Ctrl + Enter (or Cmd + Enter on macOS).
4. If everything is installed correctly, you should see a scatterplot of the mpg dataset in the "Plots" window.
   1. If you get an error indicating that RStudio could not find function “ggplot”, run the first line separately by highlighting it before you click the “Run” button, then run the second and third lines together.