

R Skill Lab: Software download & Install Instructions

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This document outlines how to download and install three programs: R, RStudio, and depending on your operating system, either MiKTeX or MacTeX.

Step 1: Download & install R

Note that you should download & install R first.

For Windows machines: - Go to <https://cran.r-project.org/bin/windows/base/> - Click **Download R 3.5.3 for Windows** (current version as of 4.1.19) - Open the .exe file and follow recommended install instructions and settings

For Mac OS: - Go to <https://cran.r-project.org/bin/macosx/> - Click **R-3.5.3.pkg** (current version as of 4.1.19) - Install following recommended install instructions and settings

Step 2: Download & install RStudio

For all: - Go to <https://www.rstudio.com/products/rstudio/download/#download> - Click on the installer **RStudio 1.1.463** (current version as of 4.1.19) appropriate for your OS - Follow recommended install instructions and settings

Step 3: Download & install Tex editor

For windows machines: - Go to <https://miktex.org/download> - Click the download button to install MiKTeX (basic-miktex-2.9.7021-x64.exe as of 4.1.19)
- Follow recommended install instructions and settings

For Mac OS: - Go to <http://www.tug.org/mactex/downloading.html> - Click on **MacTeX.pkg** (17 April 2018 version) to download - Install following instructions on page

For more help or explicit instructions, see:

For Windows machines - http://www.reed.edu/data-at-reed/software/R/r_studio_pc.html

For Mac OS - http://www.reed.edu/data-at-reed/software/R/r_studio.html

Or email me with questions: toddcombs@wustl.edu

Verify the installs

After installing the software, open RStudio and type the following code into the Console pane. You will be installing a package (also called a library) called *tidyverse*, and printing the first few rows of a dataset included in the package called mpg. The code is in color in the grey boxes and the output is in the lines starting with two hashtags ##.

```
install.packages('tidyverse', repos="http://ftp.ussg.iu.edu/CRAN/")

## Installing package into 'C:/Users/Todd/Documents/R/win-library/3.5'
## (as 'lib' is unspecified)

## package 'tidyverse' successfully unpacked and MD5 sums checked
##
## The downloaded binary packages are in
## C:\Users\Todd\AppData\Local\Temp\RtmpmmqZ92\downloaded_packages

library(tidyverse)

## -- Attaching packages ----- tidyverse 1.2.1 --

## v ggplot2 3.1.0      v purrr  0.3.2
## v tibble  2.1.1      v dplyr  0.8.0.1
## v tidyr   0.8.3      v stringr 1.4.0
## v readr   1.3.1      v forcats 0.4.0

## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()

mpg

## # A tibble: 234 x 11
##   manufacturer model displ  year  cyl trans drv   cty   hwy fl   class
##   <chr>          <chr> <dbl> <int> <int> <chr> <chr> <int> <int> <chr> <chr>
## 1 audi          a4      1.8  1999    4 auto~ f     18    29 p    comp~
## 2 audi          a4      1.8  1999    4 manu~ f     21    29 p    comp~
## 3 audi          a4      2    2008    4 manu~ f     20    31 p    comp~
## 4 audi          a4      2    2008    4 auto~ f     21    30 p    comp~
## 5 audi          a4      2.8  1999    6 auto~ f     16    26 p    comp~
## 6 audi          a4      2.8  1999    6 manu~ f     18    26 p    comp~
## 7 audi          a4      3.1  2008    6 auto~ f     18    27 p    comp~
## 8 audi          a4 q~    1.8  1999    4 manu~ 4     18    26 p    comp~
## 9 audi          a4 q~    1.8  1999    4 auto~ 4     16    25 p    comp~
## 10 audi         a4 q~    2    2008    4 manu~ 4     20    28 p    comp~
## # ... with 224 more rows
```

You should see this output if you've installed R & RStudio correctly.

For MikTeX/MacTeX installs, open RStudio, choose *File - New file - R Markdown*; then choose *PDF* in the popup box, and click *OK*. Next, click the button *Knit* near the top left, and save the file with a title in the dialogue box. **NOTE THE FILE LOCATION** A PDF document like the included `TESTRMD.pdf` should display.