

Laptop Prep for “Hands-on: Visual Data Analysis with R”

Overview

Laptop preparation for class consists of five steps:

1. Download the .ZIP from GitHub
2. Installation of the R programming language.
3. Installation of the RStudio IDE.
4. Unzipping the “VisualDataAnalysisStudentFiles.zip” file archive to your local hard drive.
5. Installation of R packages.

NOTE – Administrator permission may be required to complete laptop prep. Also, often it is necessary to disable anti-virus software to allow for the installation of R packages. As such, disabling any anti-virus is recommended before laptop prep. Also, if you have older versions of R and RStudio already installed, it is highly recommended upgrading to the latest versions.

The GitHub repository with all required course files is located here:

- <https://github.com/DaveOnData/TDWIVisualDataAnalysisWithR>

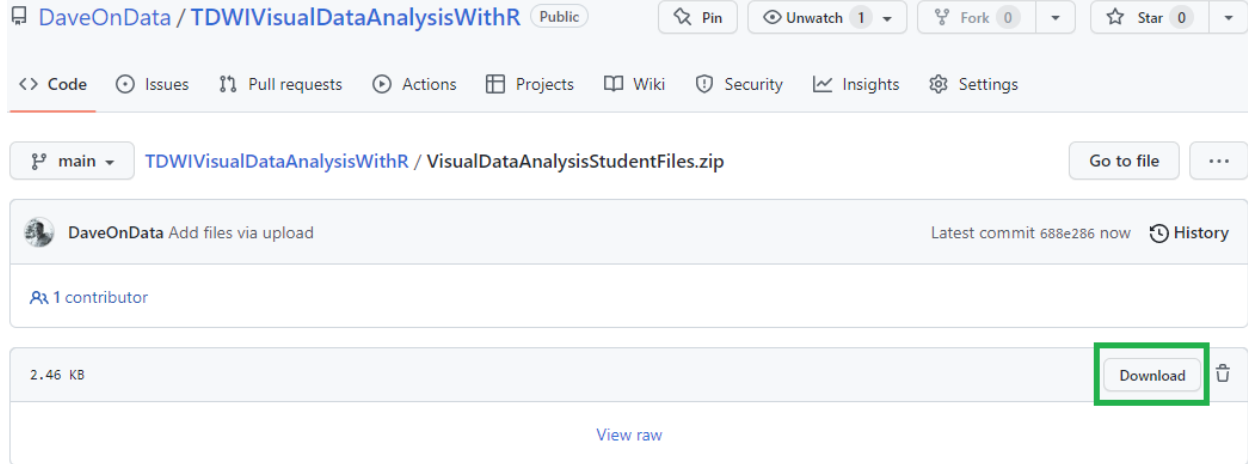
Hardware Requirements

1. Windows or Mac OS X preferred (instructors have no experience with Linux).
2. 8GB of RAM, 16GB of RAM preferred.
3. 500MB of free drive space.
4. WiFi capability.

Step 1 - Download the .ZIP from GitHub

1. Within the GitHub repository page, click on the link for the “VisualDataAnalysisStudentFiles.zip” file:

2. On the next page, click the “Download” button:



3. Move the .ZIP file from your Downloads folder to a well-known location on your laptop.

Step 2 - R Installation

1. Open your browser and navigate to: <https://cran.rstudio.com/>
2. Select the R installer applicable to your laptop:

Download and Install R

Precompiled binary distributions of the base system and contributed packages, **Windows and Mac** users most likely want one of these versions of R:

- [Download R for Linux](#)
- [Download R for \(Mac\) OS X](#)
- [Download R for Windows](#)

R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above.

3. Download the applicable installer for your laptop (Windows shown below):
Subdirectories:
[base](#) Binaries for base distribution. This is what you want to [install R for the first time](#).
4. Run the R installer, accept all the default installer settings, and install R.

Step 3 - RStudio Installation

1. Open your browser and navigate to:
<https://www.rstudio.com/products/rstudio/download/#download>
2. Scroll down the webpage to select and download the installer applicable to your laptop:

All Installers and Tarballs

RStudio requires a 64-bit operating system. If you are on a 32 bit system, you can use [an older version of RStudio](#).

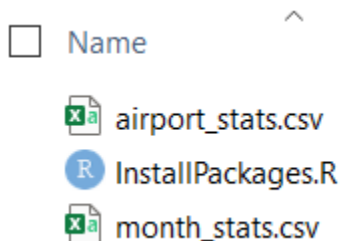
Linux users may need to import [Posit's public code-signing key](#) prior to installation, depending on the operating system's security policy.

| OS | Download | Size | SHA-256 |
|---------------|---|----------|--------------------------|
| Windows 10/11 | RSTUDIO-2022.12.0-353.EXE ↴ | 202.76MB | FD8EA4B4 |
| macOS 10.15+ | RSTUDIO-2022.12.0-353.DMG ↴ | 365.70MB | FD4BEBB5 |

3. Run the RStudio installer, accept all the default installer settings, and install RStudio.

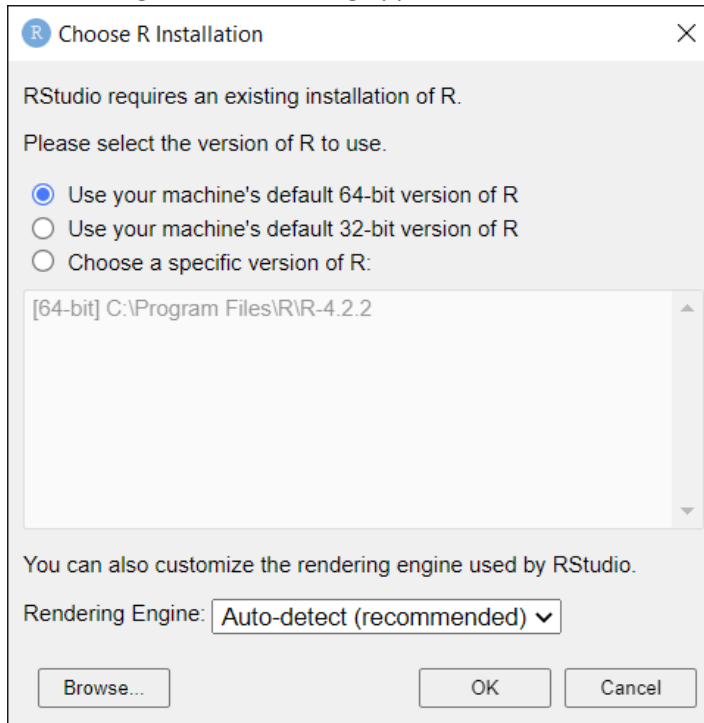
Step 4 – Unzipping Class Files

1. Unzip the VisualDataAnalysisStudentFiles.zip file to a well-known location on your laptop's drive.
2. You should see the following files in the chosen file folder:

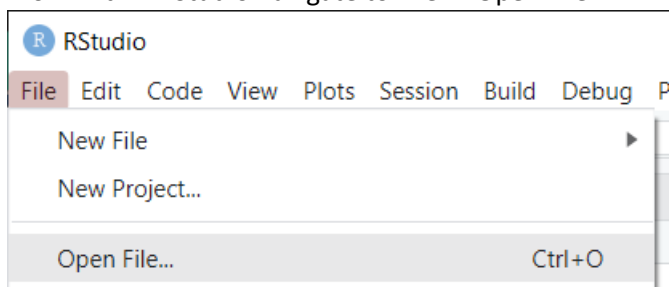


R Packages Installation

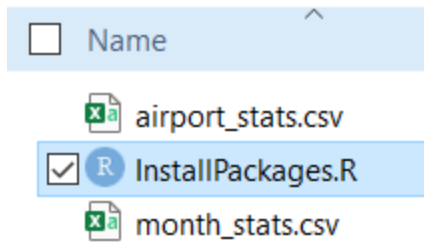
1. Open RStudio.
2. If the dialog like the following appears, click the “OK” button:



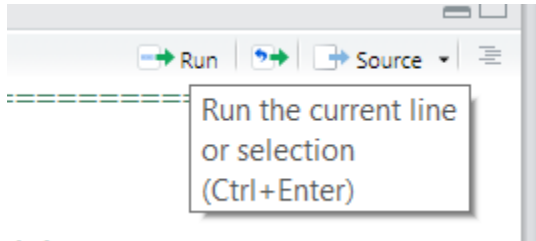
3. From within RStudio navigate to File -> Open File:



4. Using the file dialog, navigate to the “InstallPackages.R” file you unzipped and open in RStudio:

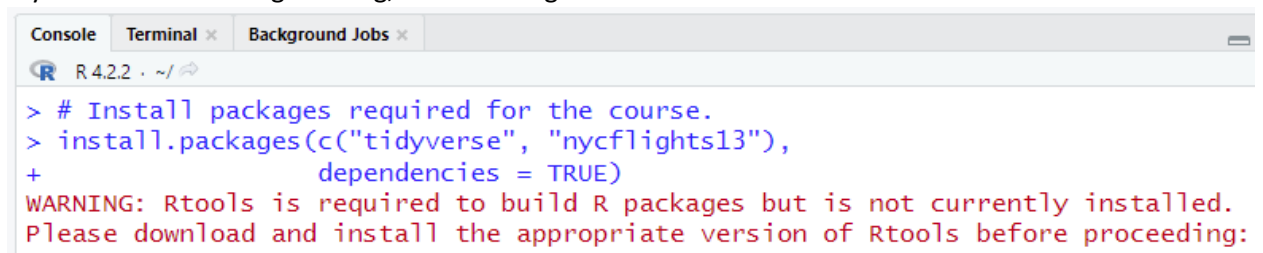


5. Within the RStudio IDE run the R code by clicking the “Run” button:

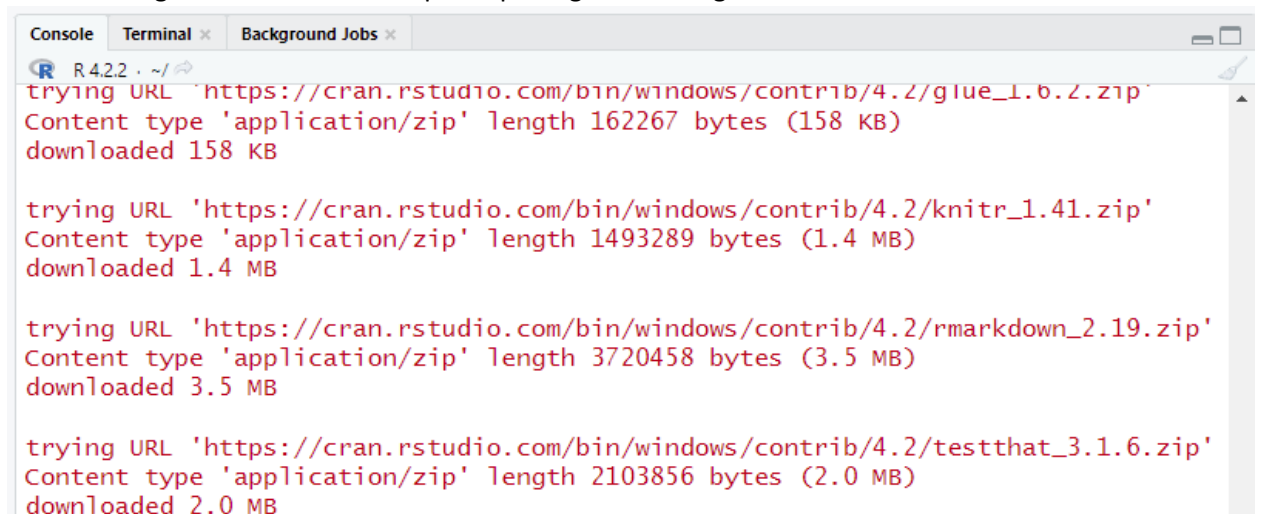


6. Running the R code will download and install several packages to your laptop. This process can take several minutes, depending on your Internet connection and laptop speed. **NOTE** – To install the required packages, your laptop will need to be able to download files from <https://cran.rstudio.com>.

7. If you see the following warning, it is safe to ignore:



8. The following indicates that the required packages are being downloaded:



9. The following indicates that installation was successful:

```
Console Terminal x Background Jobs x
R 4.2.2 · ~/
package 'rmarkdown' successfully unpacked and MD5 sums checked
package 'testthat' successfully unpacked and MD5 sums checked
package 'tidyverse' successfully unpacked and MD5 sums checked
package 'nycflights13' successfully unpacked and MD5 sums checked

The downloaded binary packages are in
  C:\Users\david\AppData\Local\Temp\Rtmp0gzOB0\downloaded_packages
installing the source package 'highr'

trying URL 'https://cran.rstudio.com/src/contrib/highr_0.10.tar.gz'
Content type 'application/x-gzip' length 15084 bytes (14 KB)
downloaded 14 KB

* installing *source* package 'highr' ...
** package 'highr' successfully unpacked and MD5 sums checked
** using staged installation
** R
** inst
** byte-compile and prepare package for lazy loading
** help
*** installing help indices
** building package indices
** installing vignettes
** testing if installed package can be loaded from temporary location
** testing if installed package can be loaded from final location
** testing if installed package keeps a record of temporary installation path
* DONE (highr)

The downloaded source packages are in
  'C:\Users\david\AppData\Local\Temp\Rtmp0gzOB0\downloaded_packages'
> |
```

Congratulations! You are now ready for the class!