Laptop Prep for "Hands-on: Machine Learning Made Easy"

Overview

Laptop preparation for class consists of five steps, with detailed instructions below:

1. Download the .ZIP from GitHub
2. Installation of the R programming language.
3. Installation of the RStudio IDE.
4. Unzipping the "MLMadeEasyStudentFiles.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. Lastly, if you have older R and RStudio already installed, upgrading to the latest versions is highly recommended.

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

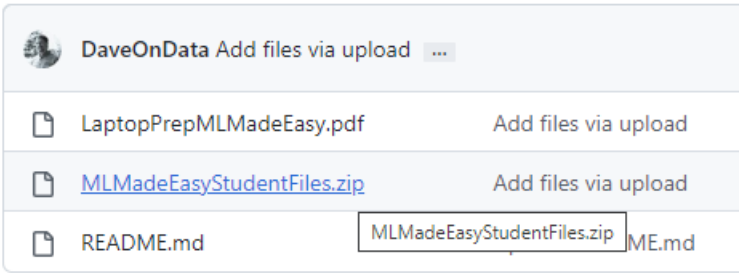
- https://github.com/DaveOnData/TDWIMachineLearningMadeEasy

Hardware Requirements

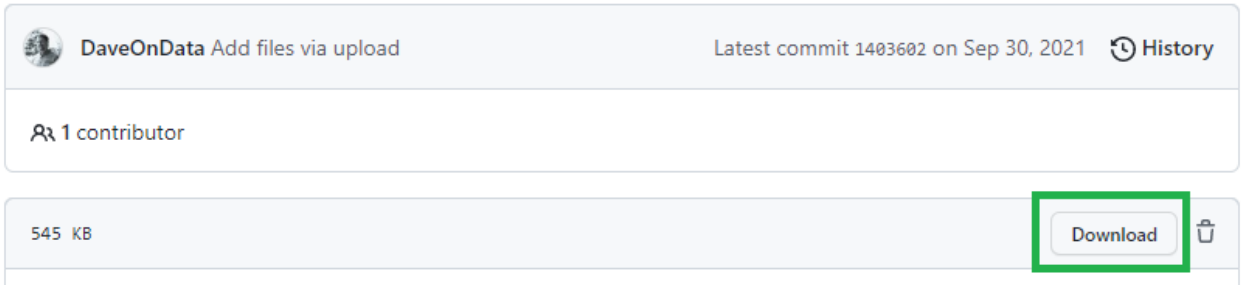
1. Windows or Mac OS X preferred (instructors have no experience with Linux).
2. 4GB of RAM, 8GB of RAM preferred.
3. 500MB of free drive space.
4. WiFi capability.

Step 1 - Download the .ZIP file from GitHub

1. Within the GitHub repository page, click on the link for the "MLMadeEasyStudentFiles.zip" file:



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

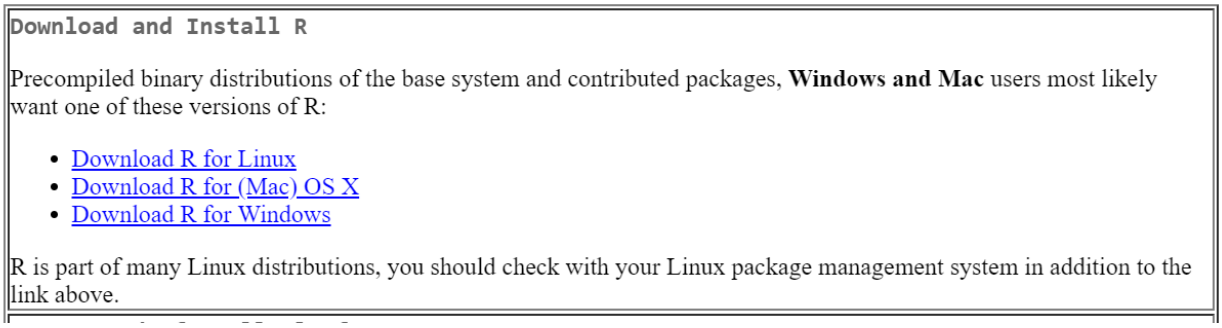


3. Move the .ZIP file from your Downloads folder to a well-known location on your laptop.

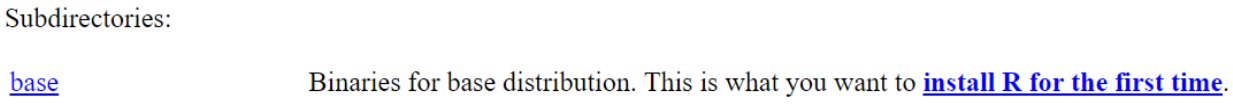
Step 2 - R Installation

1. Open your browser and navigate to: https://cran.rstudio.com/

2. Select the R installer applicable to your laptop:



3. Download the applicable installer for your laptop (Windows shown below):

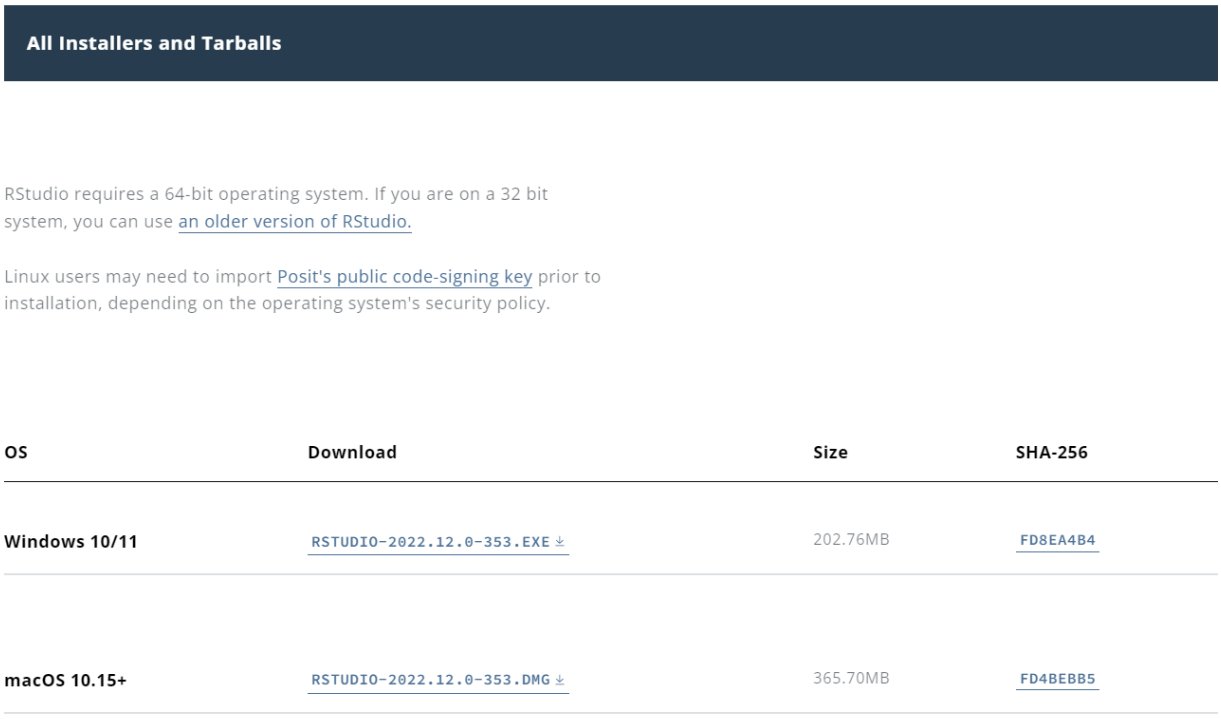


4. Run the R installer, accept all the default installer settings, and install R.

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:

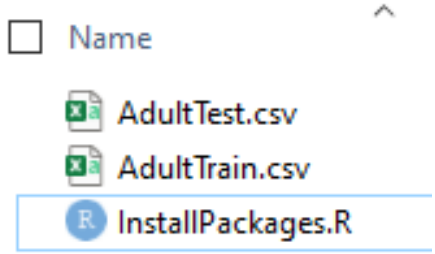


3. Run the RStudio installer, accept all the default installer settings, and install RStudio.

Step 4 – Unzipping Class Files

1. Unzip the MLMadeEasyStudentFiles.zip file to a well-known location on your laptop's hard drive.

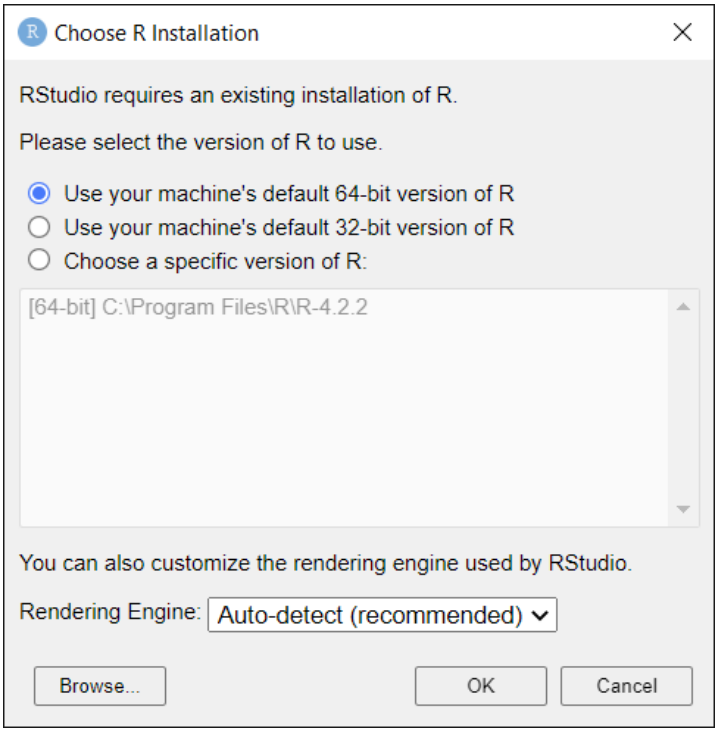
2. You should see the following files in the chosen file folder:



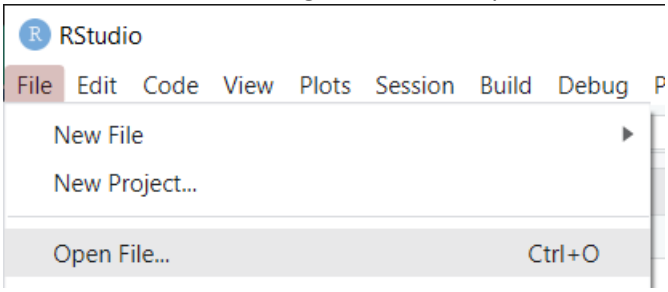
Step 5 - R Packages Installation

1. Open RStudio.

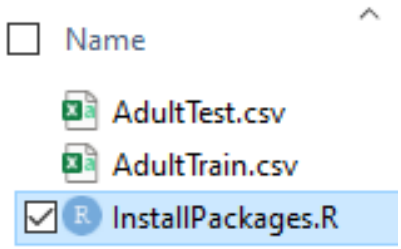
2. If a dialog like the following appears, click the “OK” button:



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



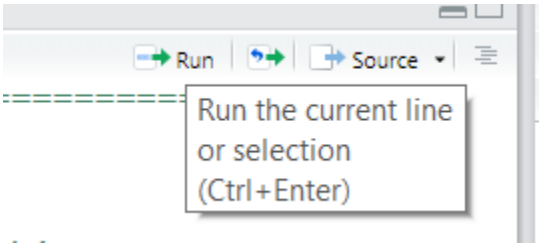
4. Using the file dialog, navigate to the “InstallPackages.R” file you unzipped and open in RStudio:



5. Using your mouse, highlight the code:

```
14 # Install packages required for the course.
15 install.packages(c("rpart", "rpart.plot", "randomForest", "caret"),
16                   dependencies = TRUE)
17
18 library(rpart)
19 library(rpart.plot)
20 library(randomForest)
21 library(caret)
```

6. Within the RStudio IDE, run the R code by clicking the "Run" button:

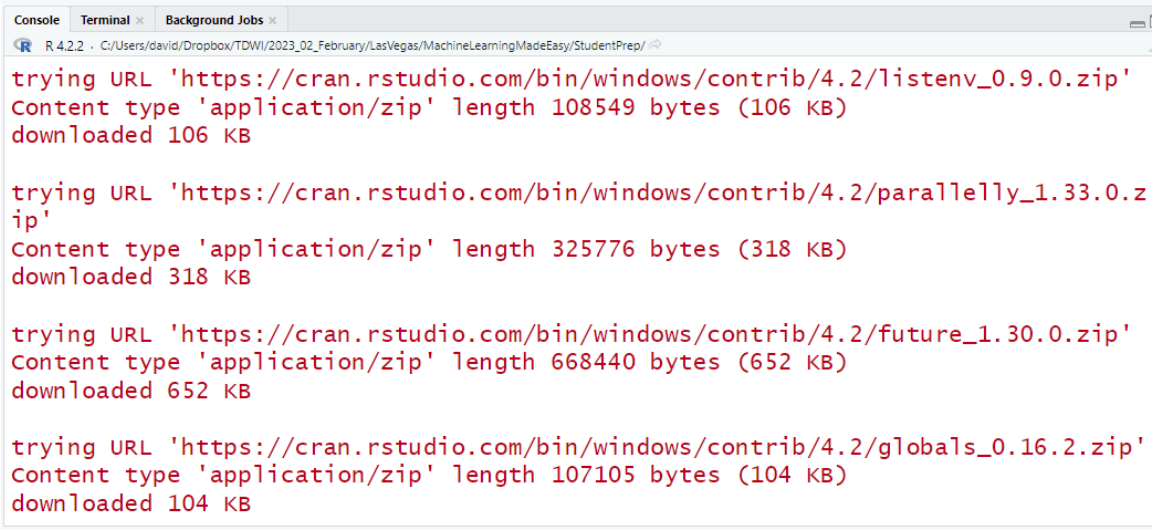


7. Running the R code will download and install many packages to your laptop. This process can take several minutes, depending on your Internet connection and laptop speed. NOTE – To install the required packages, your laptop will need to be able to download files from https://cran.rstudio.com.

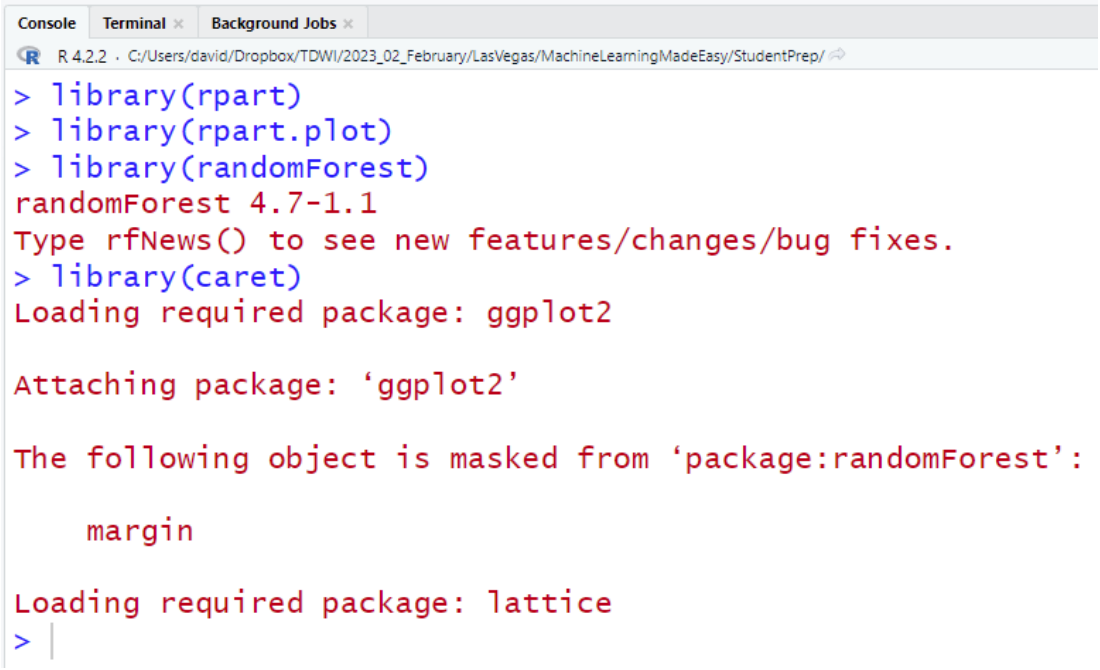
8. If you see the following warning, it is safe to ignore:

```
> install.packages(c("rpart", "rpart.plot", "randomForest", "caret"),
+                  dependencies = TRUE)
WARNING: Rtools is required to build R packages but is not currently installed.
Please download and install the appropriate version of Rtools before proceeding:
```

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



10. The following indicates that the installation was successful:



Congratulations! You are now ready for the class!