Laptop Prep for "Hands-on: Machine Learning Made Easy - No, Really!"

Overview

Laptop preparation for class consists of three high-level steps:

1. Installation of the R programming language.
2. Installation of the RStudio IDE.
3. Unzipping the "MLMadeEasyStudentFiles.zip" file archive to your local hard drive.
4. 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 installation of R packages. As such, disabling anti-virus is recommended before laptop prep.

Hardware Requirements

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

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.

RStudio Installation

1. Open your browser and navigate to:
   https://www.rstudio.com/products/rstudio/download/#download

2. Select and download the installer applicable to your laptop:

All Installers

Linux users may need to import RStudio's public code-signing key prior to installation, depending on the operating system's security policy.

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

OS	Download	Size	SHA-256
Windows 10	⬇ RStudio-1.4.1717.exe	156.18 MB	71b36e64
macOS 10.14+	⬇ RStudio-1.4.1717.dmg	203.06 MB	2cf2549d
Ubuntu 18/Debian 10	⬇ rstudio-1.4.1717-amd64.deb	122.51 MB	e27b2645
Fedora 19/Red Hat 7	⬇ rstudio-1.4.1717-x86_64.rpm	138.42 MB	648e2be0
Fedora 28/Red Hat 8	⬇ rstudio-1.4.1717-x86_64.rpm	138.39 MB	c76f620a
Debian 9	⬇ rstudio-1.4.1717-amd64.deb	123.29 MB	e4ea3a60
OpenSUSE 15	⬇ rstudio-1.4.1717-x86_64.rpm	123.15 MB	e69d55db

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

Class Files

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

2. You should see the following files:

☐ Name ⌃

- 📊 AdultTest.csv
- 📊 AdultTrain.csv
- Ⓡ InstallPackages.R
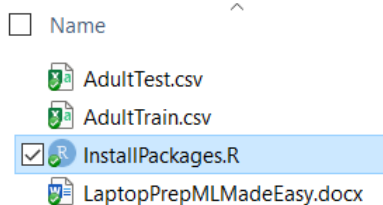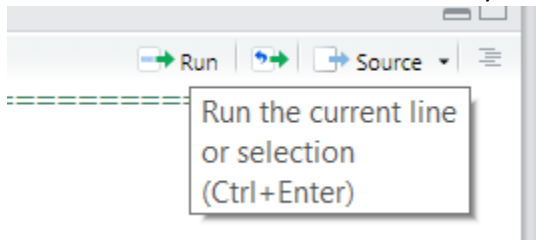- 📄 LaptopPrepMLMadeEasy.pdf
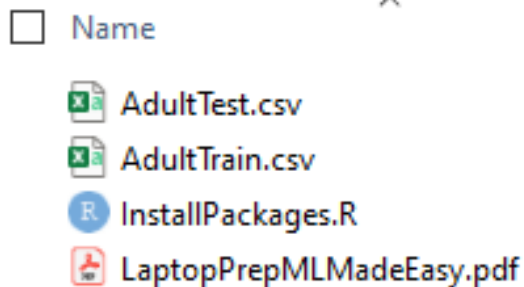
R Packages Installation

1. Open RStudio.

2. From within RStudio navigate to File -> Open File:
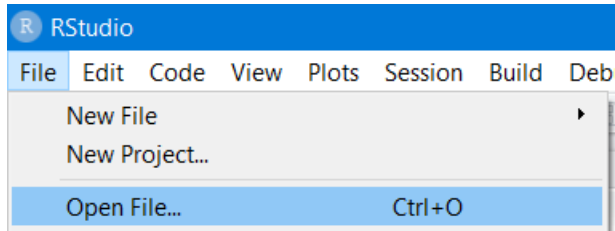
3. Using the file dialog, navigate to the "InstallPackages.R" file from .ZIP archive and open in RStudio:

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

5. Running the R code will download and install a number of packages to your laptop. This process can take several minutes depending on the speed of your Internet connection and/or laptop:

```
package 'dplyr' successfully unpacked and MD5 sums checked
package 'rpart' successfully unpacked and MD5 sums checked
package 'rpart.plot' successfully unpacked and MD5 sums checked
package 'randomForest' successfully unpacked and MD5 sums checked
package 'caret' successfully unpacked and MD5 sums checked
```

Congratulations! You are now ready for the class!