Installation

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Purpose

Through out this course we will be using R and R Studio. This document walks the students through the steps necessary to download and install required software.

R is a free, open source statistical computing environment. It is very popular these days to conduct all sorts of data manipulation and analysis tasks.

R studio is an integrated development environment that eases using R. We will be using it to (1) ease learning, (2) provide high quality reports.

By the end of this learning activity I expect you to: (1) Have R and R Studio installed, and (2) tested.

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Installing R.

A new version of R is released twice a year, thus the exact version available at the time may change. At the time of the writing, the latest version of R was 3.4.1 (June 2017). For our purposes the exact version does not matter. Just download the latest version available in Comprehensive R Archive Network[1] (CRAN).

If you are using Windows or Mac you will want to download and install R binaries from CRAN. If you are using Linux, R should be available in the Software Repositories (and you most probably don't need my guidance).

Download the R installer suitable for your operating system below.

Installers:

 R Windows Installers

 R Mac OS Installers

Install the downloaded files just like you would any other program. Basically this involves you double clicking the downloaded file and following the on screen instructions. I recommend you accept the default settings.

[1] CRAN is the official repository for R and R packages. This is where you typically obtain R.

Installing R Studio

R studio is the integrated development environment we will use for our workshop. Think of R Studio as an interface with additional functionality for R. It eases the scripting and documenting of your analysis.

You can get R Studio installer from the links below, if you want the latest version go to R Studio download page:

R Studio Windows Installers

R Studio Mac OS Installers

R Studio Linux Package

Install the downloaded files just like you would any other program. Basically this involves you double clicking the downloaded file and following the on screen instructions. I recommend you accept default settings.

Testing and Beyond

I hope you are getting excited to embark upon your analytics journey with R. Let's have a taste of R by verifying what we did so far works.

Click the icon for R studio .

You should see something like the figure below:

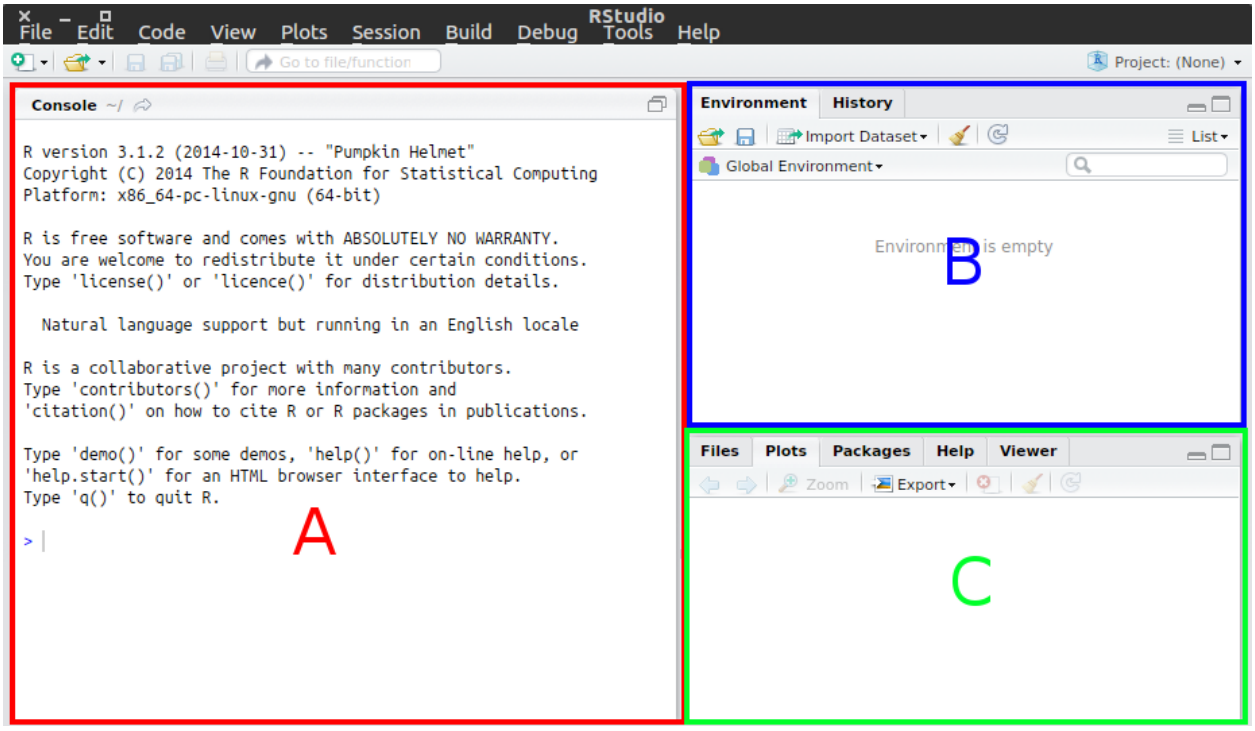

Figure 1: R Studio Layout

Area A is the interactive R console. You can write R commands here and they will be executed. Area B is the environment pane. Here you can see the data and models in the R environment. Area C is the display

pane. Here is where the Plots, Help files and such are displayed.

There is one more pane not visible at the moment, the scripting pane. You can write R scripts and R markdown files for later execution in that area.

In R console (Area A) type in the command below and press enter. Make sure you type exactly what you see. R is case sensitive (Print is not the same as print) and is very picky about correct syntax (Quotation marks and braces).

First let us do some basic arithmetic operations

```
2+2
```

You should see [1] 4 in Area A.

Now let us print out a string (piece of text).

```
print("Hello World")
```

If you see [1] "Hello World" in Area A, all is as it should be.

Type the following command to read R documentation.

```
help()
```

If you see documentation open up in Area C, all is well.
