STAT 131A – Set up your computer for the labs

Learning to use R will be a significant part of the material taught in STAT 131A. Indeed, R is widely used for statistical purposes, and offers very convenient functions and types to perform data analysis.

Here are a few guidelines to properly set up your computer for the R labs you will be doing in lecture and in sections. These guidelines are divided in three parts. First you need to install R, the programming language, on your computer. Then you need to install RStudio, an environment that will enable to type R code in an efficient manner. Finally, you need to install DataComputing, a package that contains useful R functions we will be using a lot during the labs.

Please note, that R and RStudio installation follows the same procedure you would follow to install a software on your computer, and this procedure depends on your OS (Windows, Mac, Linux…). On the other hand, DataComputing is NOT a software, so the procedure is significantly different from the two previous items. If you need further assistance, please contact your instructor or GSI.

I) Installing R

Go to this webpage: https://cran.rstudio.com/

Select "Download R for [your OS]". You will be redirected to a page proposing several distributions.

Windows: Click on "base"

Mac OS: Select the executable file adapted to your OS

Your web browser should be downloading an executable file, that you just need to open once downloading is finished so that the installer opens. Simply follow the directions adapted to your computer (32 bit or 64 bit, etc.).

II) Installing RStudio

Go to this webpage: https://www.rstudio.com/products/rstudio/download/#download

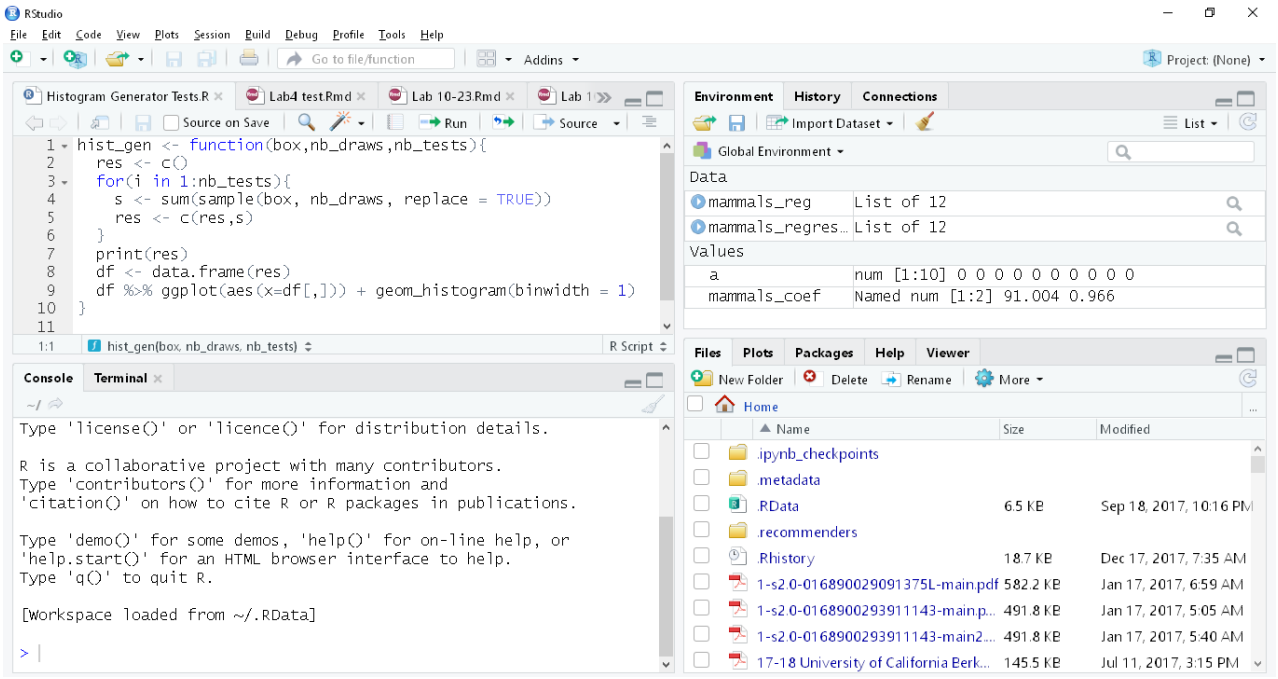
Click on the version of RStudio adapted to your OS.

Your web browser should be downloading an executable file, that you just need to open once downloading is finished so that the installer opens. Simply follow the directions adapted to your computer (32 bit or 64 bit, etc.).

III) Installing DataComputing

Open RStudio.

You should be having something like this screenshot:



We are going to install a package, which enables to install new functions that are not built-in for the standard version of R. Follow carefully the following instructions do so.

In the **console (bottom left hand corner on the screenshot)**, type this (don't copy and paste):

install.packages("devtools")

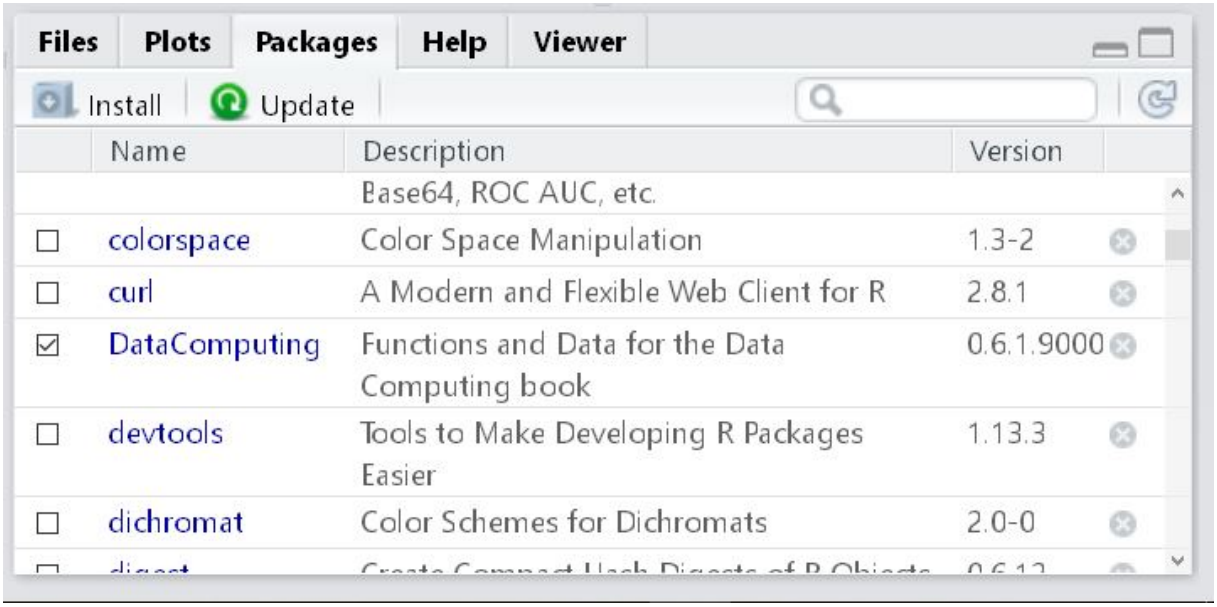
Press Enter key, and the console should take a little time to install. When it is finished, type carefully (take the capital letters into account):

devtools::install_github("DataComputing/DataComputing")

Press Enter key.

Now DataComputing should be installed in your RStudio Environment. You can check this fact by going in the Packages pane in the bottom right hand corner of RStudio Interface. Remember that DataComputing is installed once and for all, you will never have to type the commands above again.

However, one general rule about packages is that you need to remember to ***load*** (loading means telling to RStudio that you will use the functions of DataComputing, which have already been installed) the DataComputing package in the console each time you open RStudio, either by checking the box in the Packages pane (see screenshot below), or by typing the command: *library(DataComputing).*


Files
Plots
Packages
Help
Viewer
Install
Update
Name
Description
Version
Base64, ROC AUC, etc.
colorspace
Color Space Manipulation
1.3-2
curl
A Modern and Flexible Web Client for R
2.8.1
DataComputing
Functions and Data for the Data Computing book
0.6.1.9000
devtools
Tools to Make Developing R Packages Easier
1.13.3
dichromat
Color Schemes for Dichromats
2.0-0