

Installing R and RStudio

A Guide for Students

This is a guide to installing R and RStudio locally, on your own machine. Instructions for both Mac and Windows machines are included, as well as plenty of screenshots to make the process easy to follow.

1 MacOS

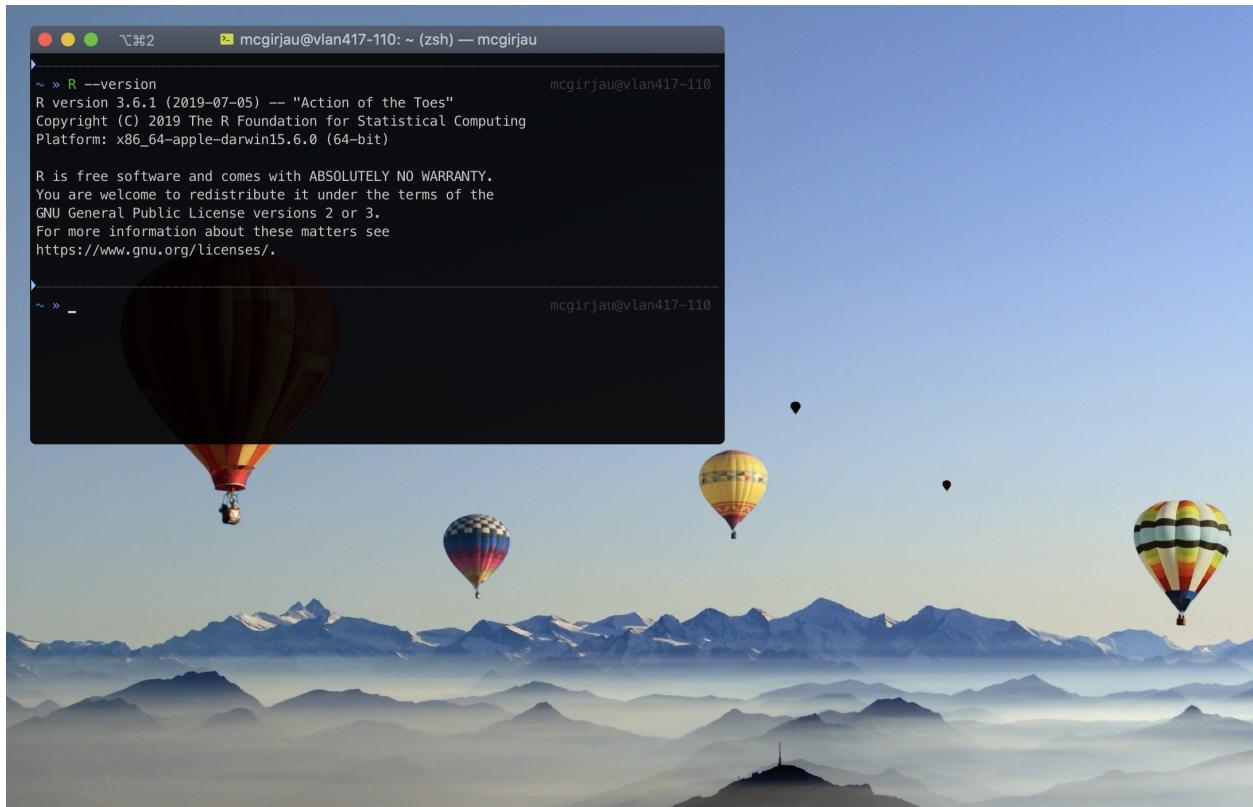
1.1 Installing R

Step 1 - Check if you already have R

If you already have R installed, skip this section and go straight to installing RStudio. To check whether you have R, open the Terminal and type:

```
R --version
```

If you get a `command not found` error, that means you don't have R installed and you can proceed with the steps below. If R is already on your machine, it's good to make sure you have the latest version installed - if your version is lower than 3.6.1, it might be a good idea to do a fresh reinstall of R.



Step 2 - Download R

Go to <https://cloud.r-project.org/> and click on *Download R for (Mac) OS X.*

The screenshot shows the 'Download and Install R' section of the R Project website. At the top, there's a large 'R' logo. Below it is a sidebar with links like CRAN, Mirrors, What's new?, Task Views, Search, About R, R Homepage, The R Journal, Software, R Sources, R Binaries, Packages, Other, Documentation, Manuals, FAQs, and Contributed. The main content area has a heading 'Download and Install R'. It says 'Precompiled binary distributions of the base system and contributed packages, Windows and Mac users most likely want one of these versions of R:' followed by a bulleted list: 'Download R for Linux', 'Download R for (Mac) OS X' (which is circled in red), and 'Download R for Windows'. Below this, a note says 'R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above.' Another section titled 'Source Code for all Platforms' explains that Windows and Mac users should download precompiled binaries, while Linux users should use package managers. It lists sources for the latest release, alpha/beta releases, daily snapshots, older versions, and contributed packages. A 'Questions About R' section provides links for answers to frequently asked questions. At the bottom, a 'What are R and CRAN?' section gives a brief overview of the software and its distribution network.

R is 'GNU S', a freely available language and environment for statistical computing and graphics which provides a wide variety of statistical and graphical techniques: linear and nonlinear modelling, statistical tests, time series analysis, classification, clustering, etc. Please consult the [R project homepage](#) for further information.

CRAN is a network of ftp and web servers around the world that store identical, up-to-date, versions of code and documentation for R. Please use the CRAN [mirror](#) nearest to you to minimize network load.

Click on the .pkg download of the latest R release (as of November 2019, that is 3.6.1, humorously nicknamed "Action of the Toes")

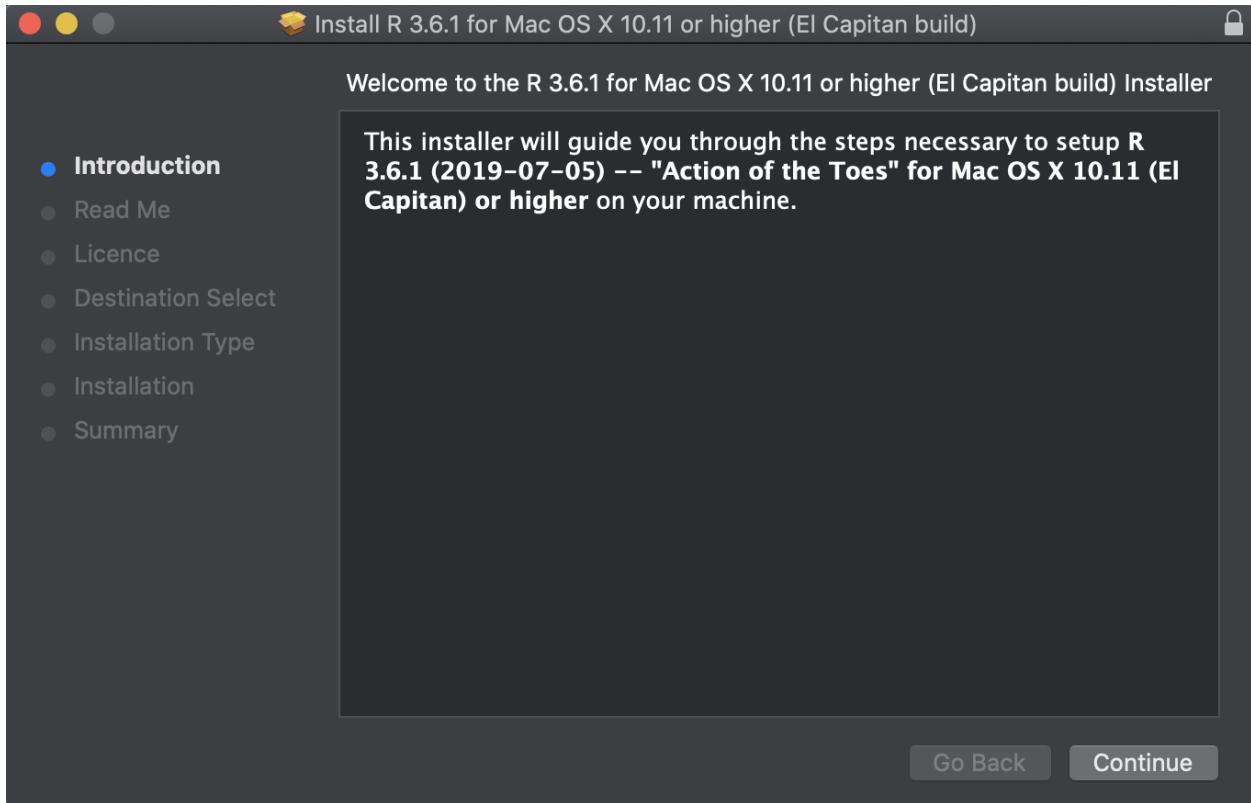
Step 3 - Start the installation

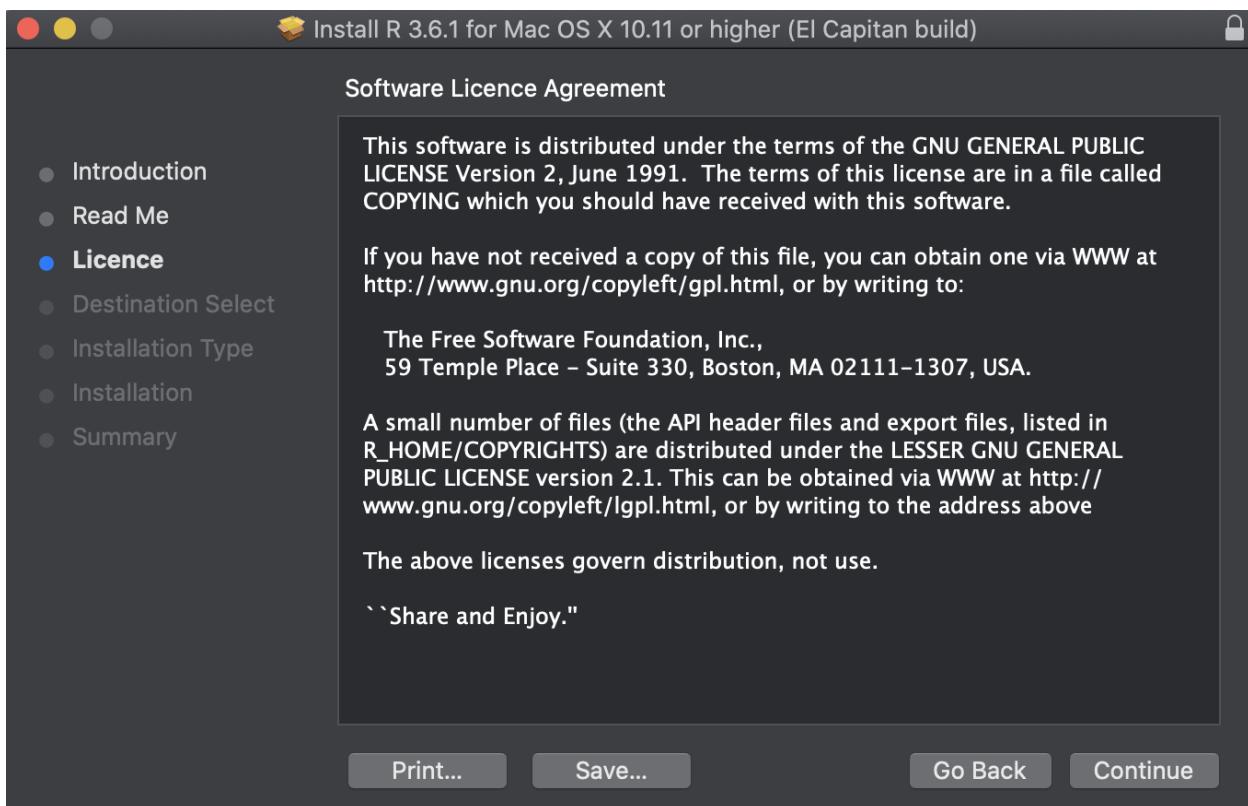
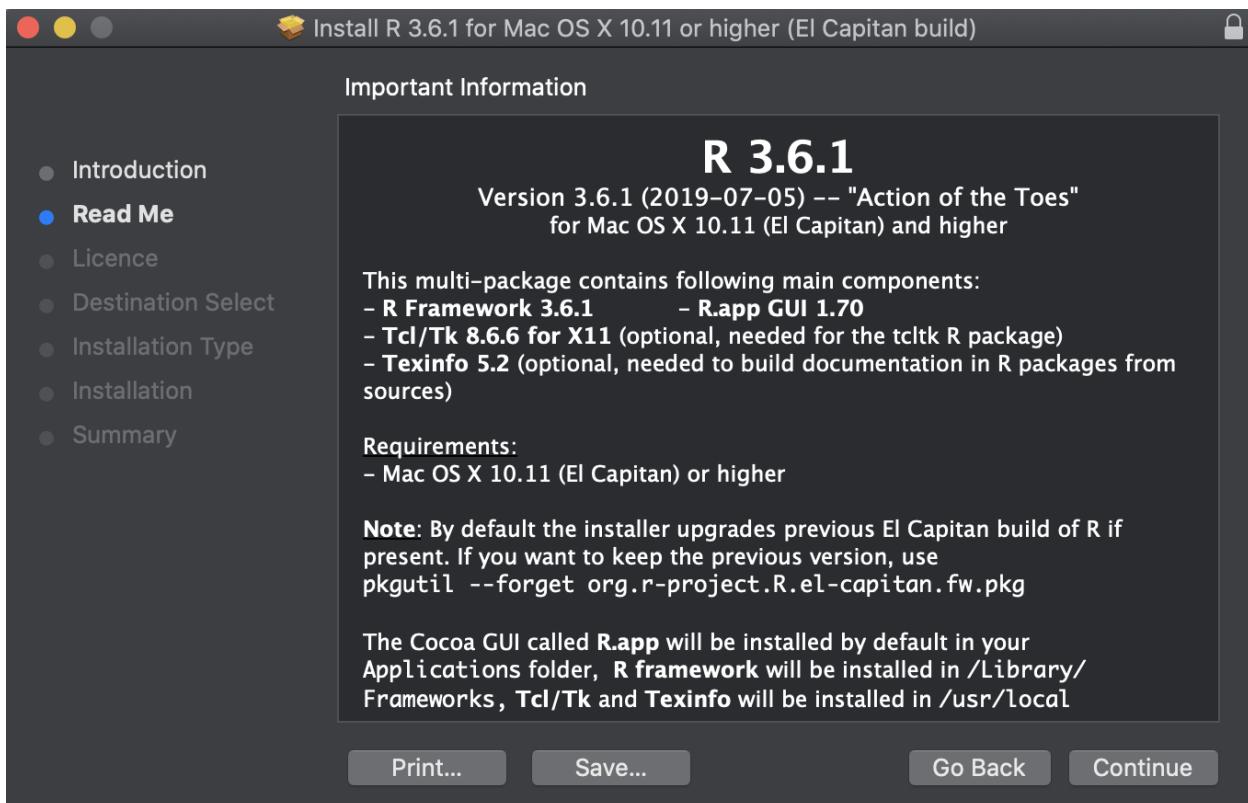
Double click on the downloaded .pkg file in your browser's Download pane to start the installer.

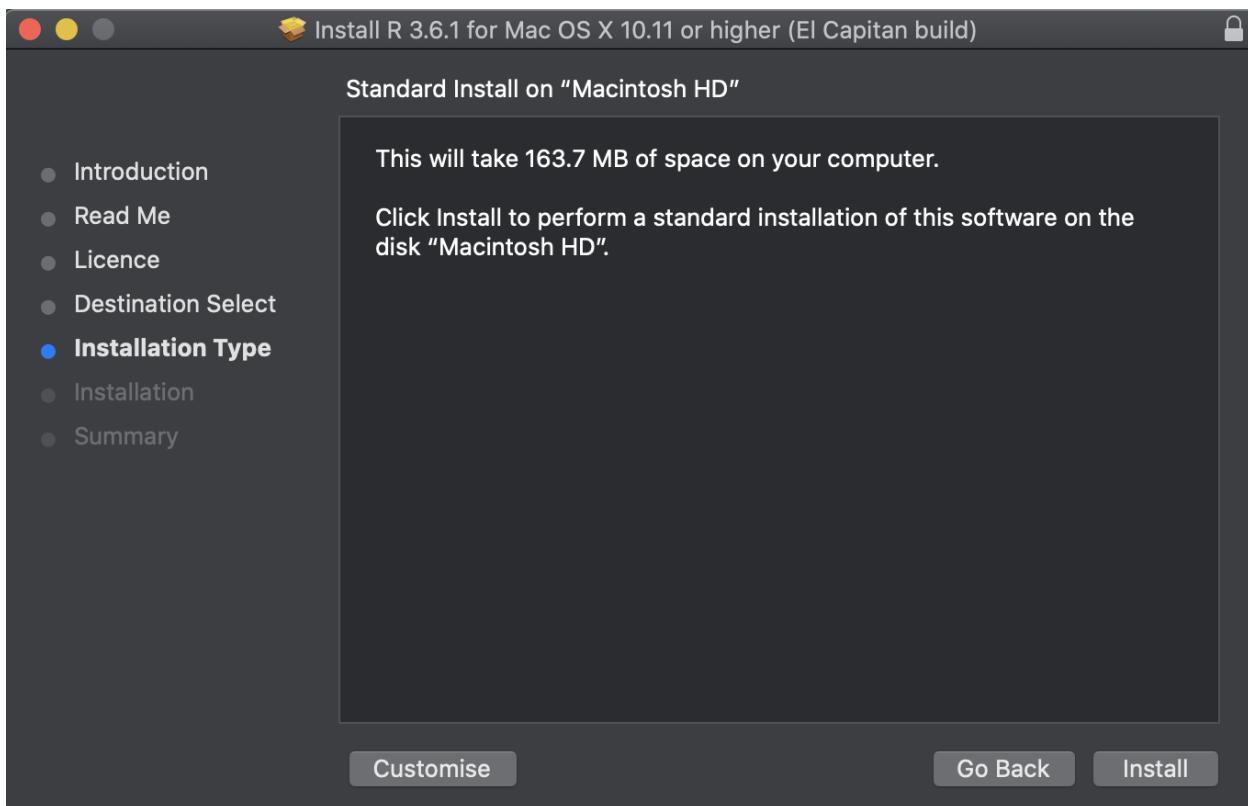
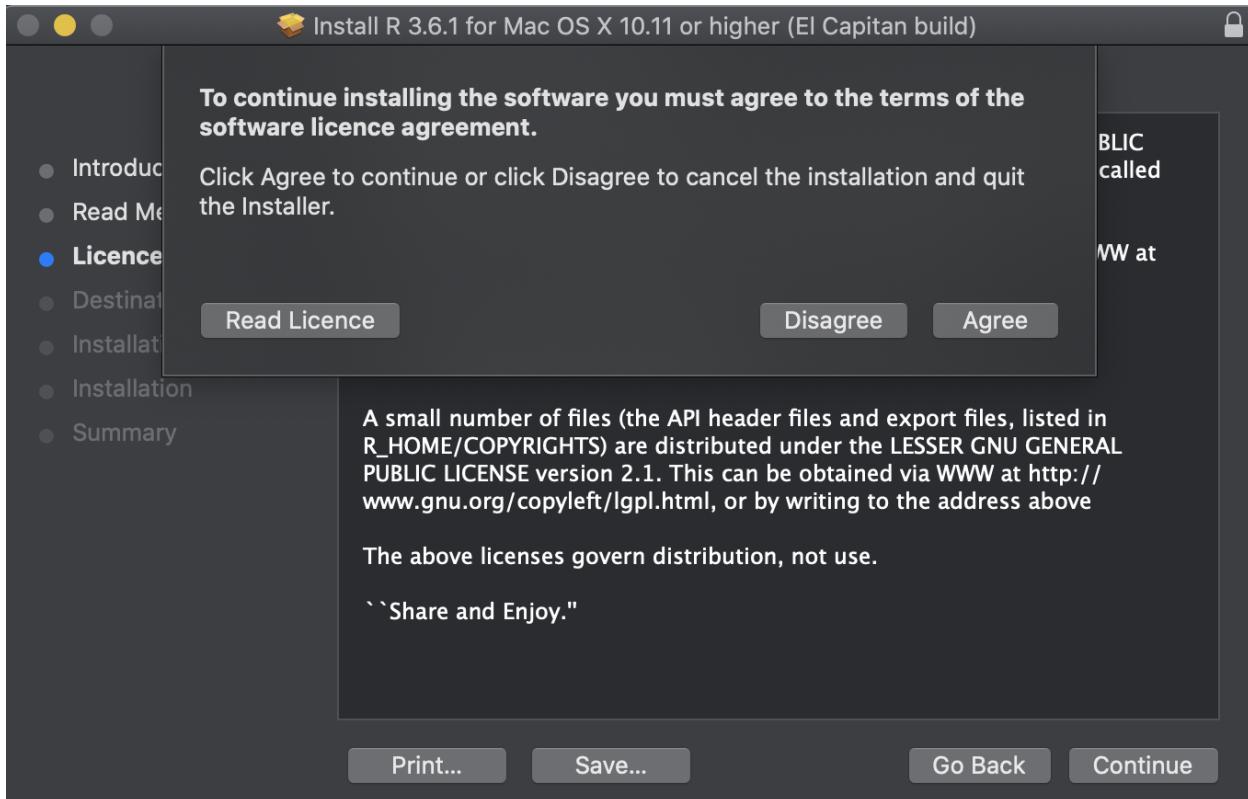
The screenshot shows the 'R for Mac OS X' page. It features the same sidebar as the previous page. The main content area starts with a heading 'R for Mac OS X'. It says 'This directory contains binaries for a base distribution and packages to run on Mac OS X (release 10.6 and above). Mac OS 8.6 to 9.2 (and Mac OS X 10.1) are no longer supported but you can find the last supported release of R for these systems (which is R 1.7.1) [here](#). Releases for old Mac OS X systems (through Mac OS X 10.5) and PowerPC Macs can be found in the [old](#) directory.' A note below states that CRAN does not have Mac OS X systems and cannot check binaries for viruses. It also mentions that package binaries for R versions older than 2.12.0 are only available from the CRAN archive. The page then lists the 'R 3.6.1 "Action of the Toes" released on 2019/07/05'. It includes an important note about providing binaries for OS X 10.11 (El Capitan) and higher. It also provides instructions for validating the MD5 checksum of the downloaded image. A 'Latest release:' section shows the 'R-3.6.1.pkg' file, which is circled in red. The file details are: MD5 hash: 270...5e013870d2a9179b54eae277f41657b0, SHA1 hash: 4e9328e5013870d2a9179b54eae277f41657b0 (ca. 76MB). A note below says that the use of X11 (including tcltk) requires XQuartz to be installed since it is no longer part of OS X. It also notes that this release uses Clang 7.0.0 and GNU Fortran 6.1. The 'NEWS' section for Mac GUI is mentioned, along with the 'Mac-GUI-1.70.tar.gz' file, which is also circled in red. The file details are: MD5 hash: b1ef5f285524640680a22965bb880018. A note at the bottom says that previous R versions for El Capitan can be found in the el-capitan/base directory.

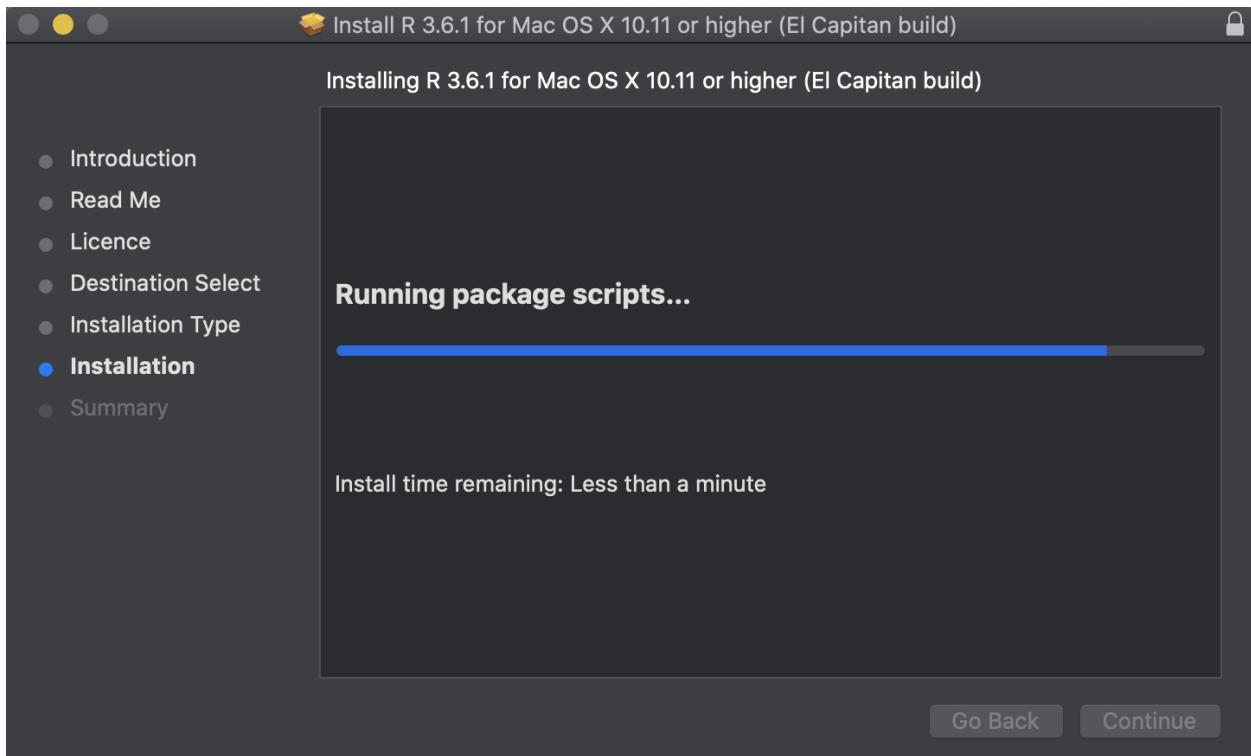
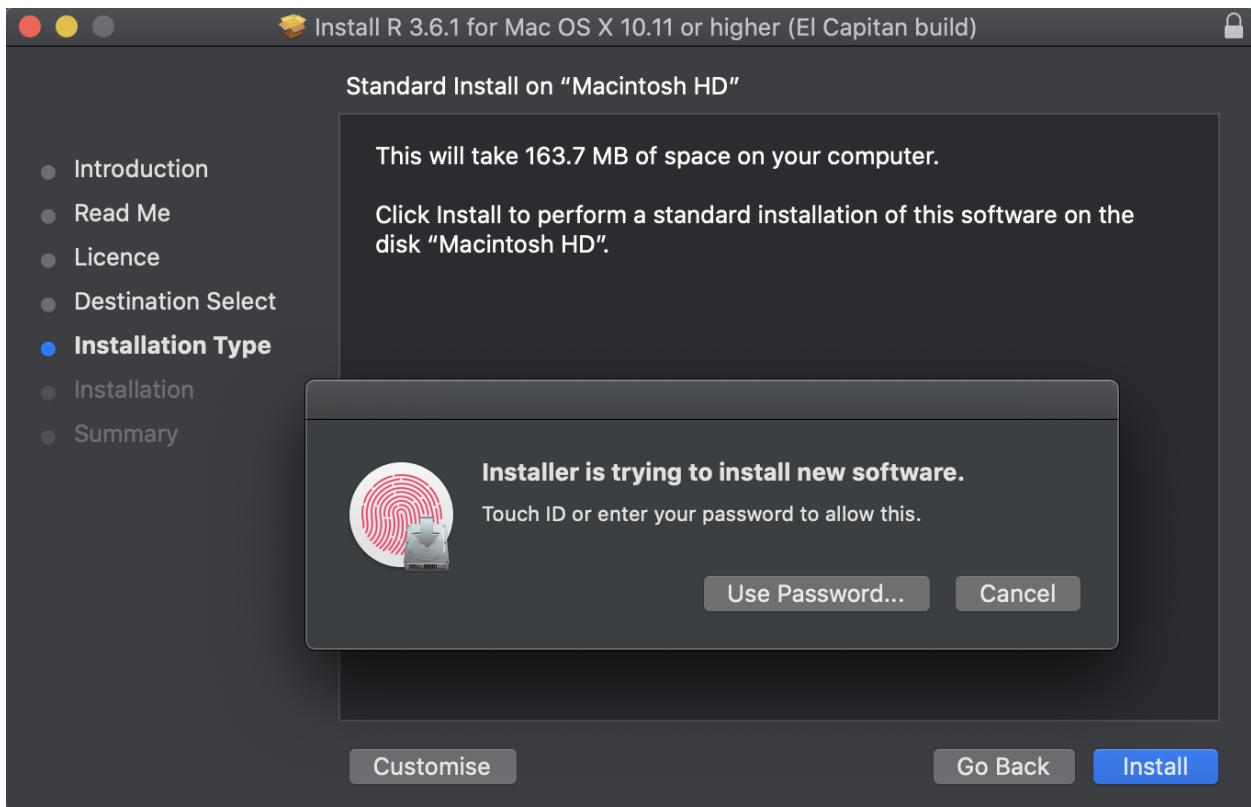
Step 4 - The Installation Process

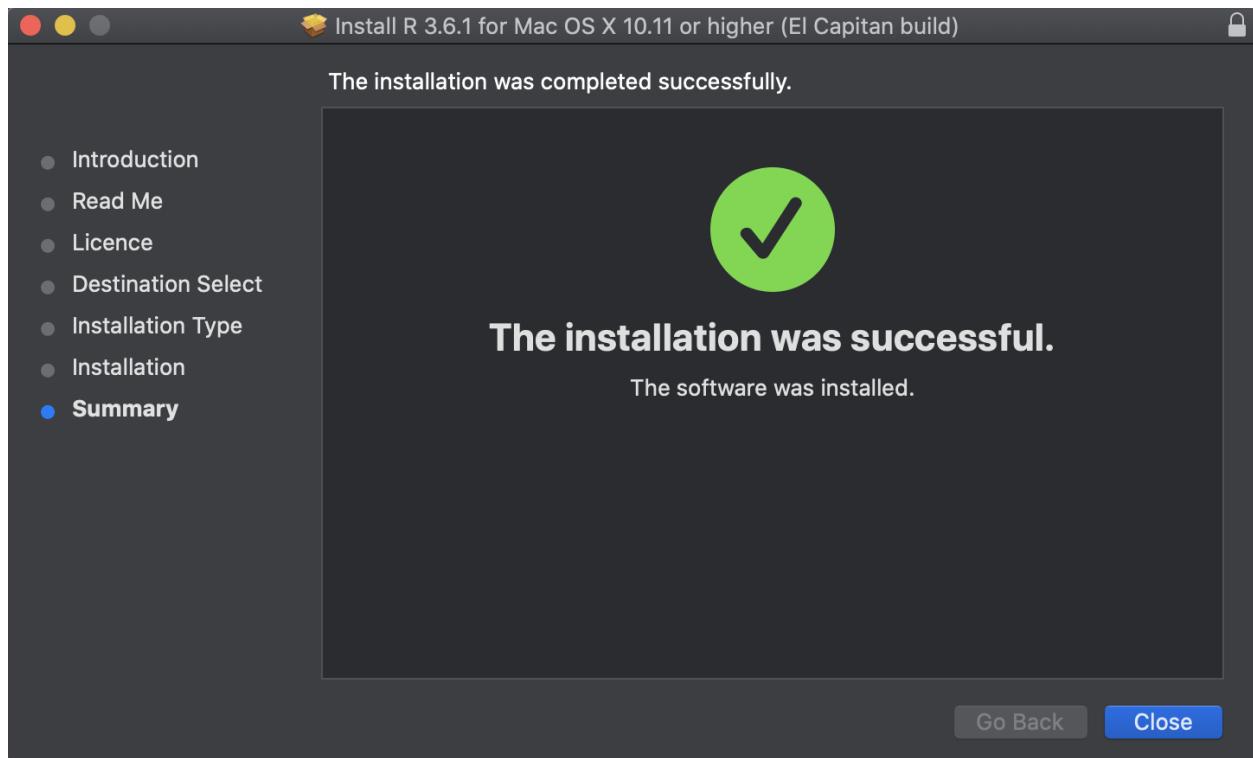
If you've ever installed anything on your Mac, you should be pretty comfortable with this. Keep pressing *Continue*, agree to the software license agreement, and let the installer do the work for you. The installation is not big (just over 160Mb), but make sure you have sufficient disk space nonetheless.











1.2 Installing RStudio

1.3 Installing LaTeX

2 Windows

2.1 Installing R

2.2 Installing RStudio

2.3 Installing LaTeX