

# Data Science Academy

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## R – Fundamentos para Análise de Dados

## Instalando R e R Studio no Mac

1. A instalação do R e R Studio foi feita no Mac OS X El Capitan. Mas a instalação pode ser feita em versões anteriores do Mac OS X.



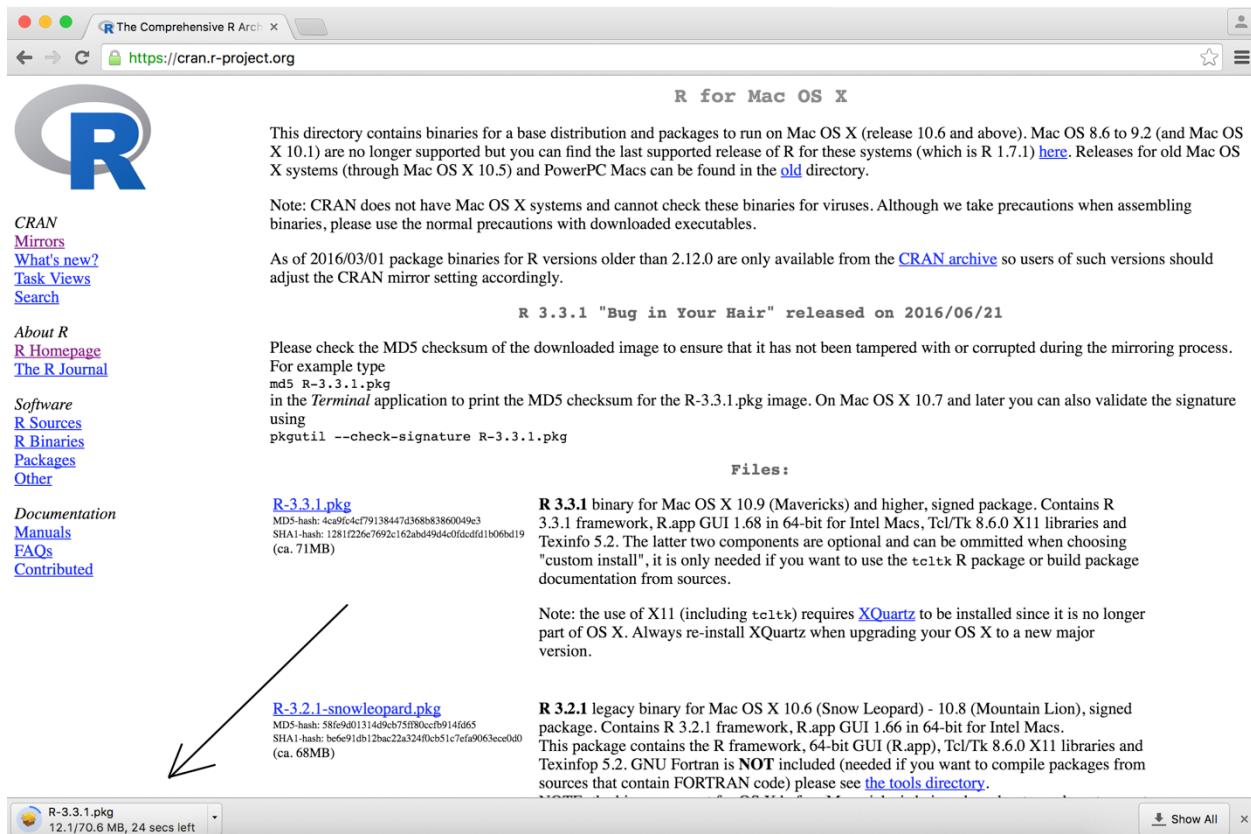
2. Acesse o site <https://cran.r-project.org> para fazer o download da versão mais recente do R para Mac OS X. Clique no link “Download R for (Mac) OS X”.

The screenshot shows a web browser window with the title 'The Comprehensive R Archive Network'. The URL in the address bar is <https://cran.r-project.org>. On the left side, there's a sidebar with links for 'CRAN', 'Mirrors', 'What's new?', 'Task Views', 'Search', 'About R', 'R Homepage', and 'The R Journal'. Below that is a 'Software' section with links for 'R Sources', 'R Binaries', 'Packages', and 'Other'. Further down are sections for 'Documentation', 'Manuals', 'FAQs', and 'Contributed'. The main content area is titled 'Download and Install R' and contains a list of precompiled binary distributions for Windows and Mac users. It also notes that R is part of many Linux distributions. Below this is a 'Source Code for all Platforms' section with instructions for Windows and Mac users. At the bottom, there's a 'Questions About R' section with a link to frequently asked questions. The overall layout is clean and organized, typical of a scientific software archive.

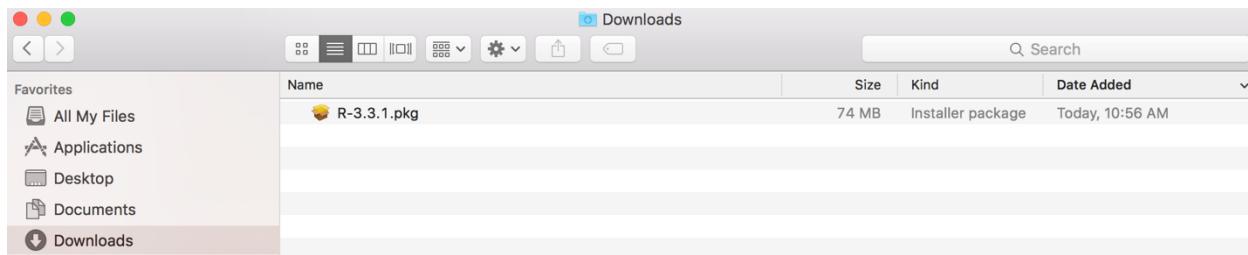
3. Selecione a opção de download de acordo com a versão do seu Mac OS X (usaremos a versão 3.3.1 de 21 de Junho de 2016).

The screenshot shows a web browser window with the title "The Comprehensive R Arch x". The URL in the address bar is <https://cran.r-project.org>. The main content is titled "R for Mac OS X". It states: "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 says: "Note: CRAN does not have Mac OS X systems and cannot check these binaries for viruses. Although we take precautions when assembling binaries, please use the normal precautions with downloaded executables." Another note states: "As of 2016/03/01 package binaries for R versions older than 2.12.0 are only available from the [CRAN archive](#) so users of such versions should adjust the CRAN mirror setting accordingly." Below this, a section titled "R 3.3.1 'Bug in Your Hair' released on 2016/06/21" provides instructions for verifying the integrity of the downloaded package using md5sum or pkgsign. It also lists the file size as approximately 71MB. A note at the bottom of this section says: "Note: the use of X11 (including tcltk) requires [XQuartz](#) to be installed since it is no longer part of OS X. Always re-install XQuartz when upgrading your OS X to a new major version." At the bottom of the page, there is a link to "R-3.2.1-snowleopard.pkg" with its own set of MD5 and SHA1 checksums.

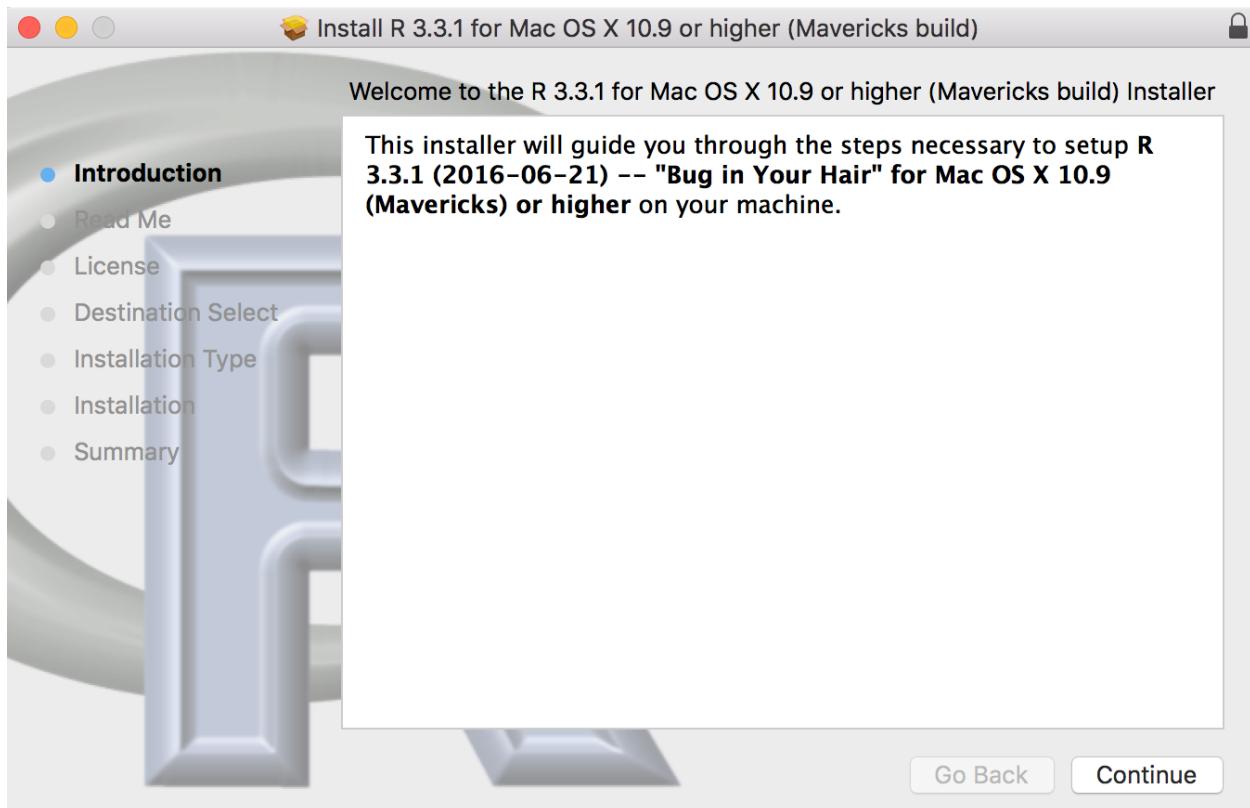
4. Download em andamento. O arquivo será gravado na sua pasta padrão de downloads, normalmente chamada Downloads.



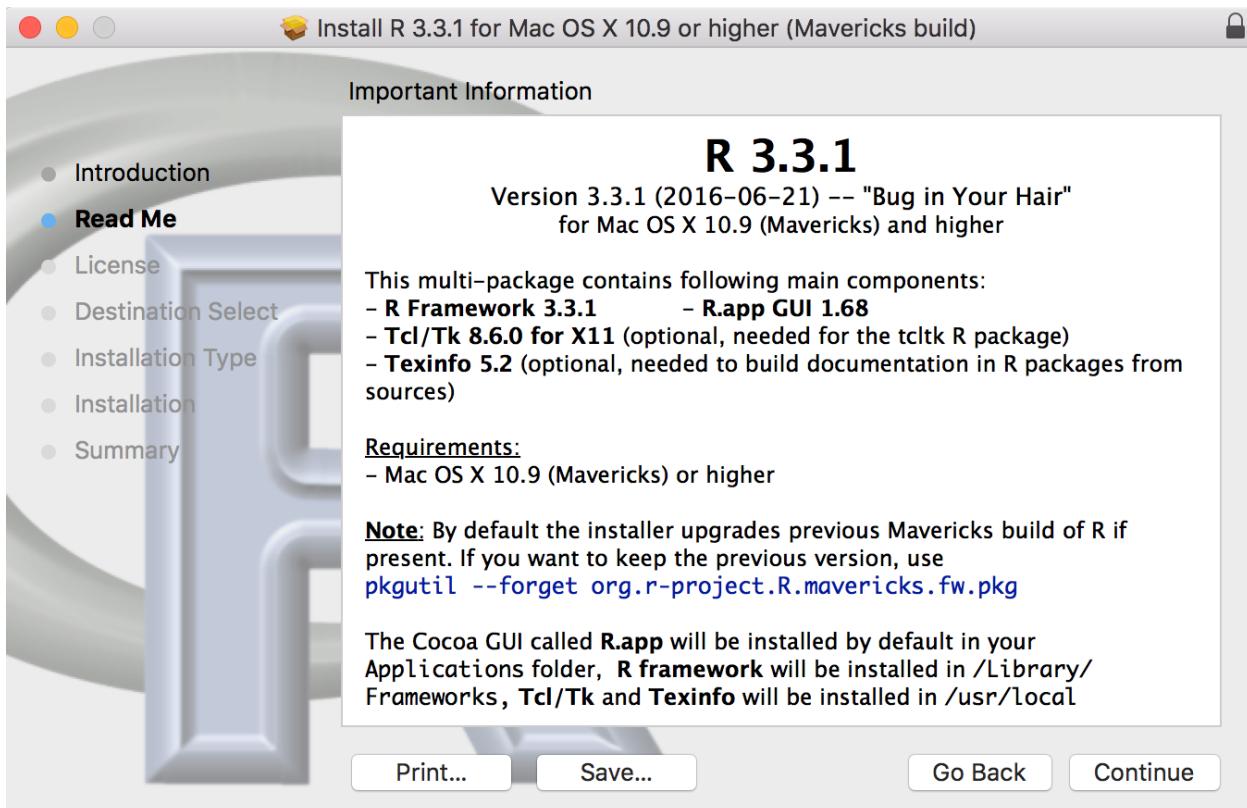
5. Será feito o download de um arquivo com extensão .pkg.

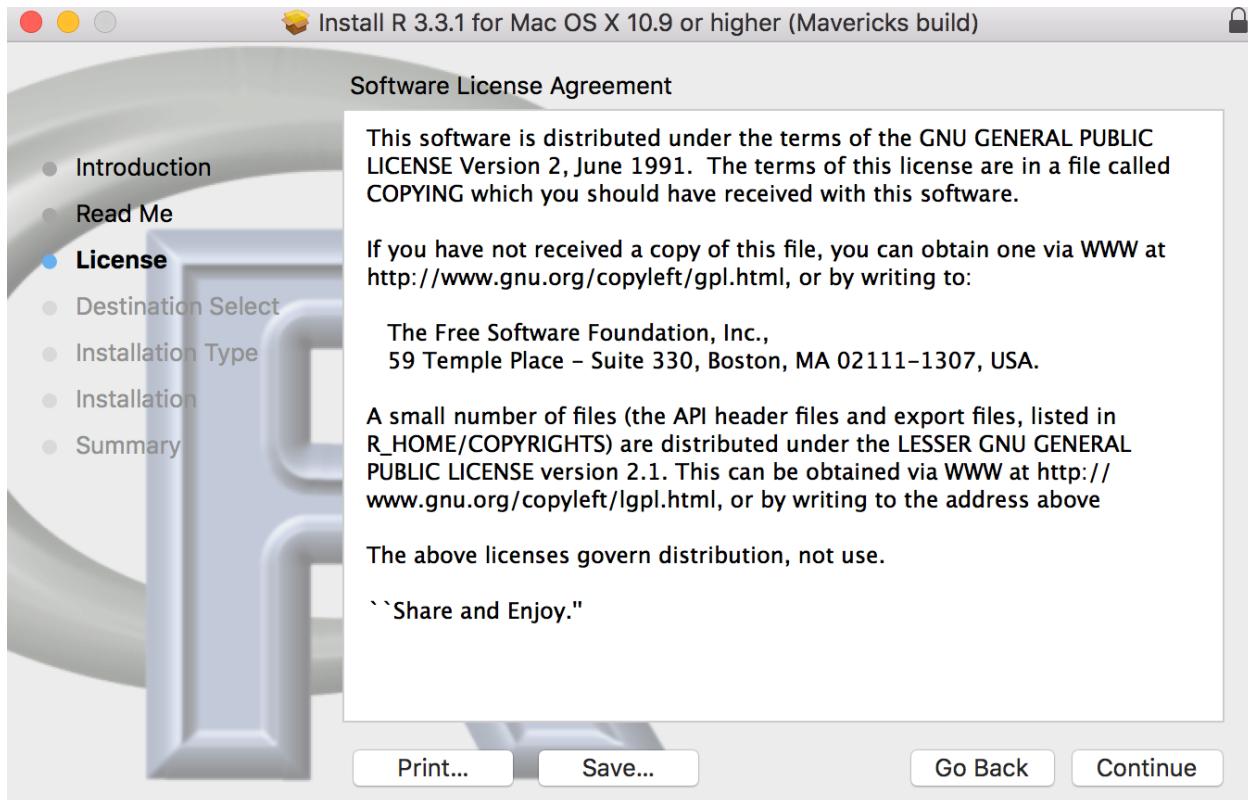


6. Execute o arquivo para iniciar a instalação. Clique no botão **Continue**.

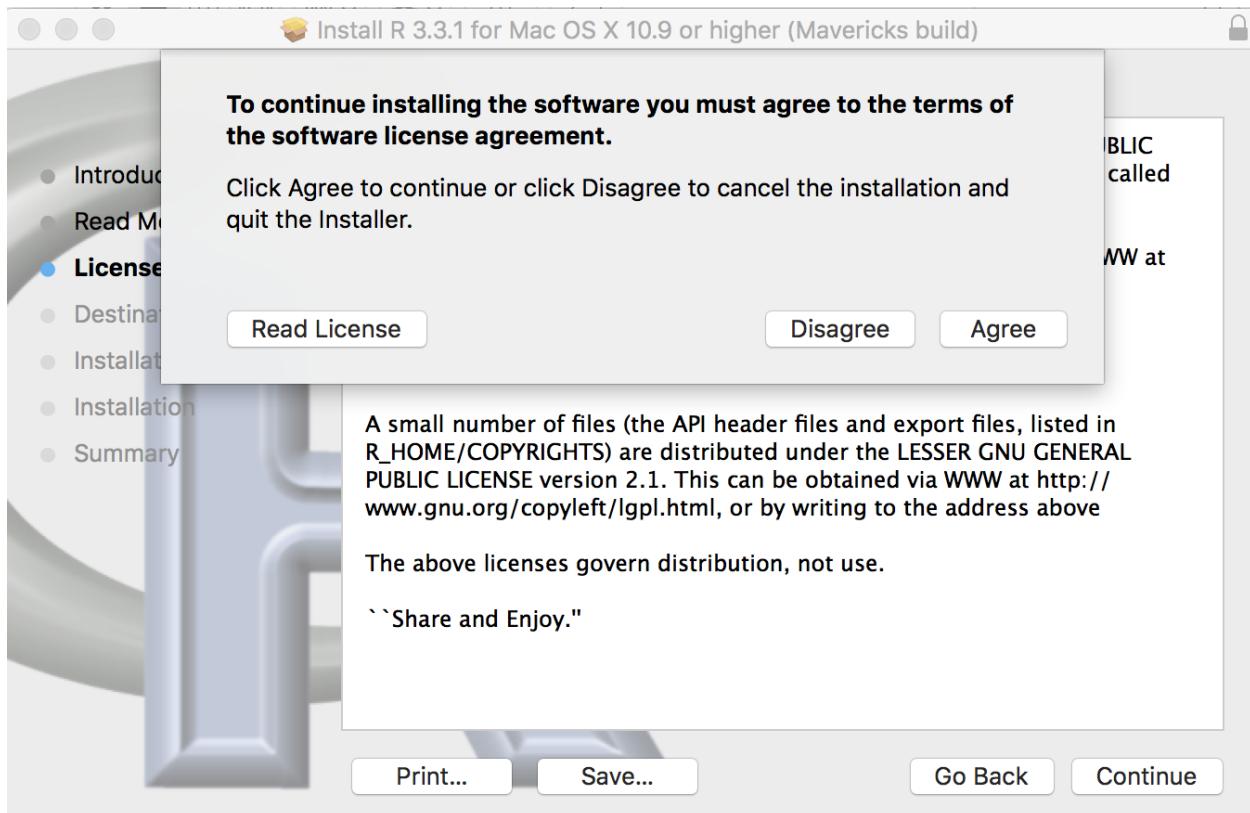


7. Clique no botão **Continue**.

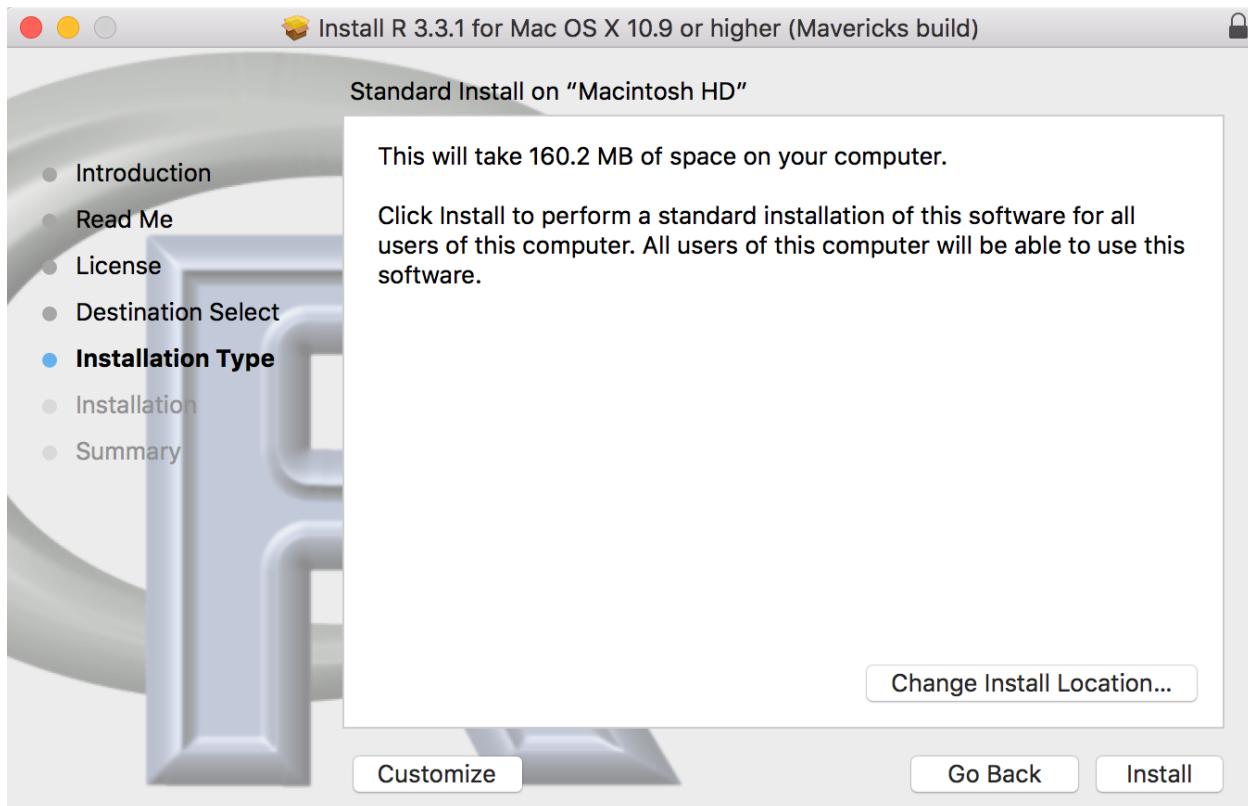


8. Termo de licença de uso. Clique no botão **Continue**.

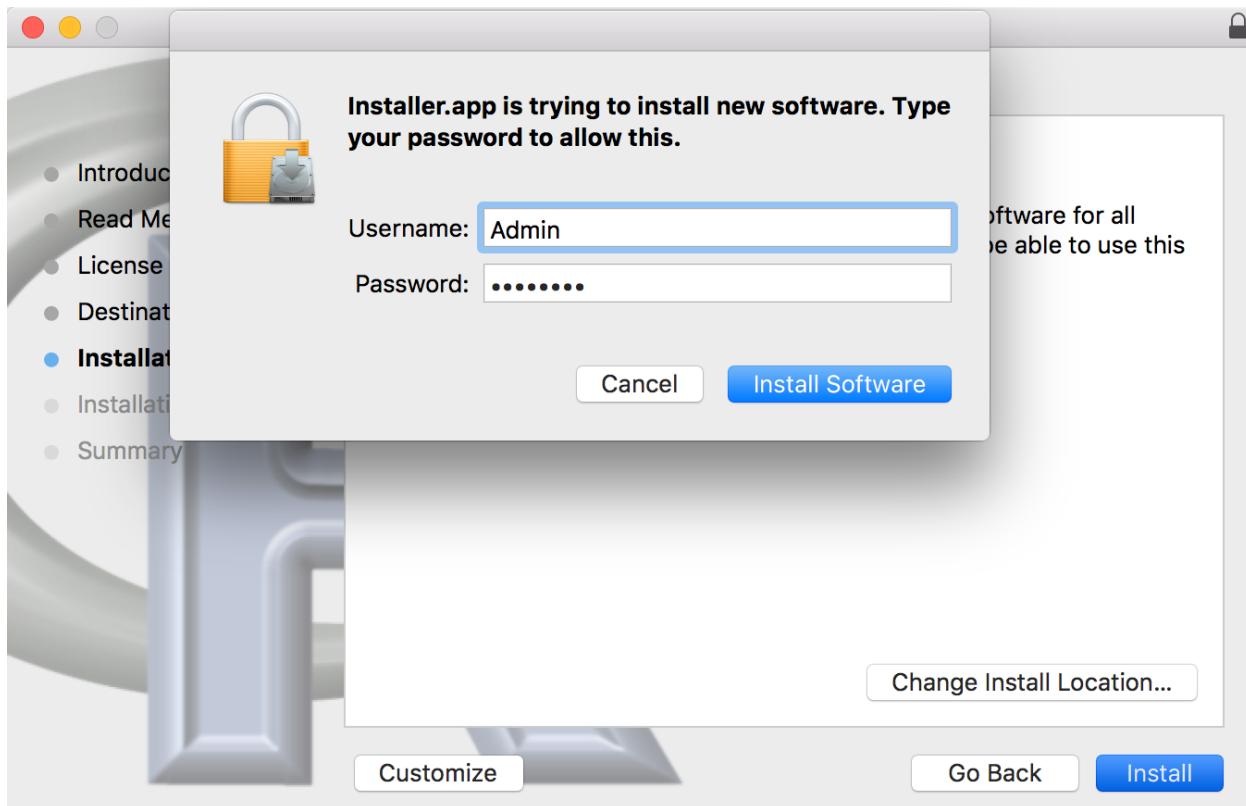
9. Aceite o termo de licença de uso, clicando no botão **Agree**.



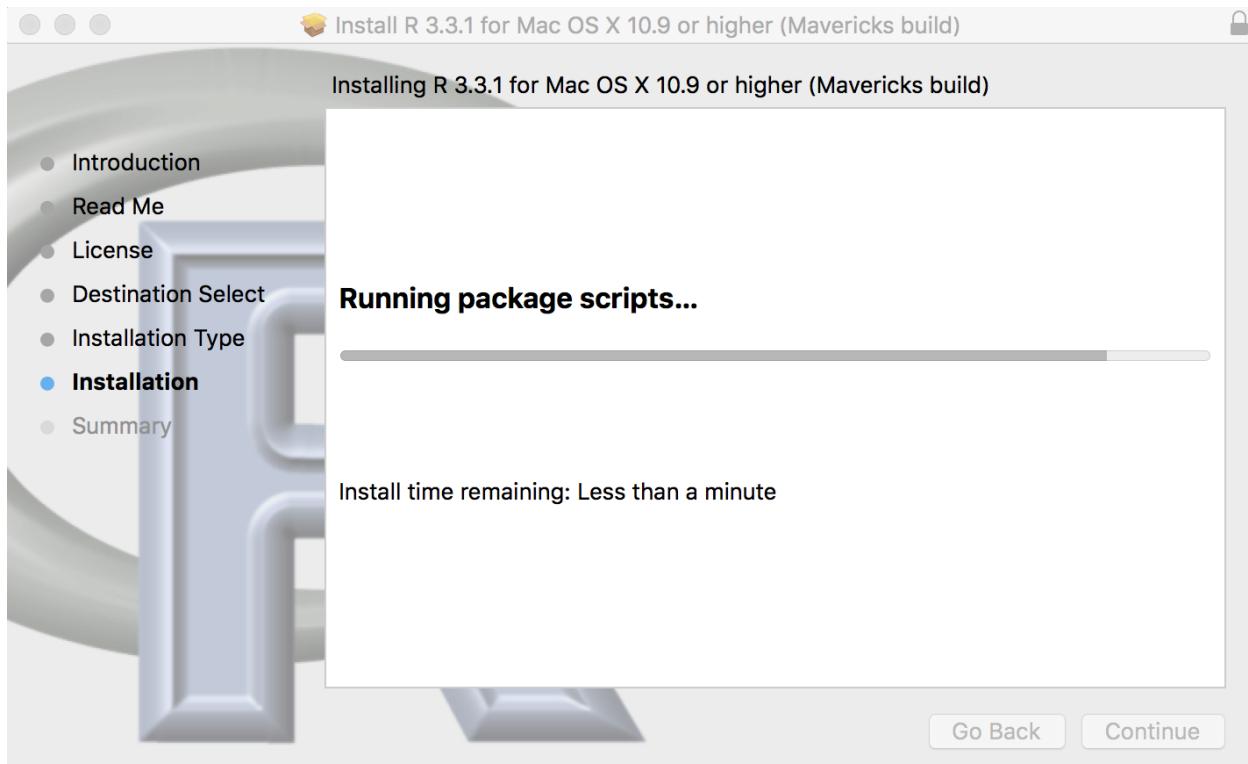
10. Clique no botão **Install**.



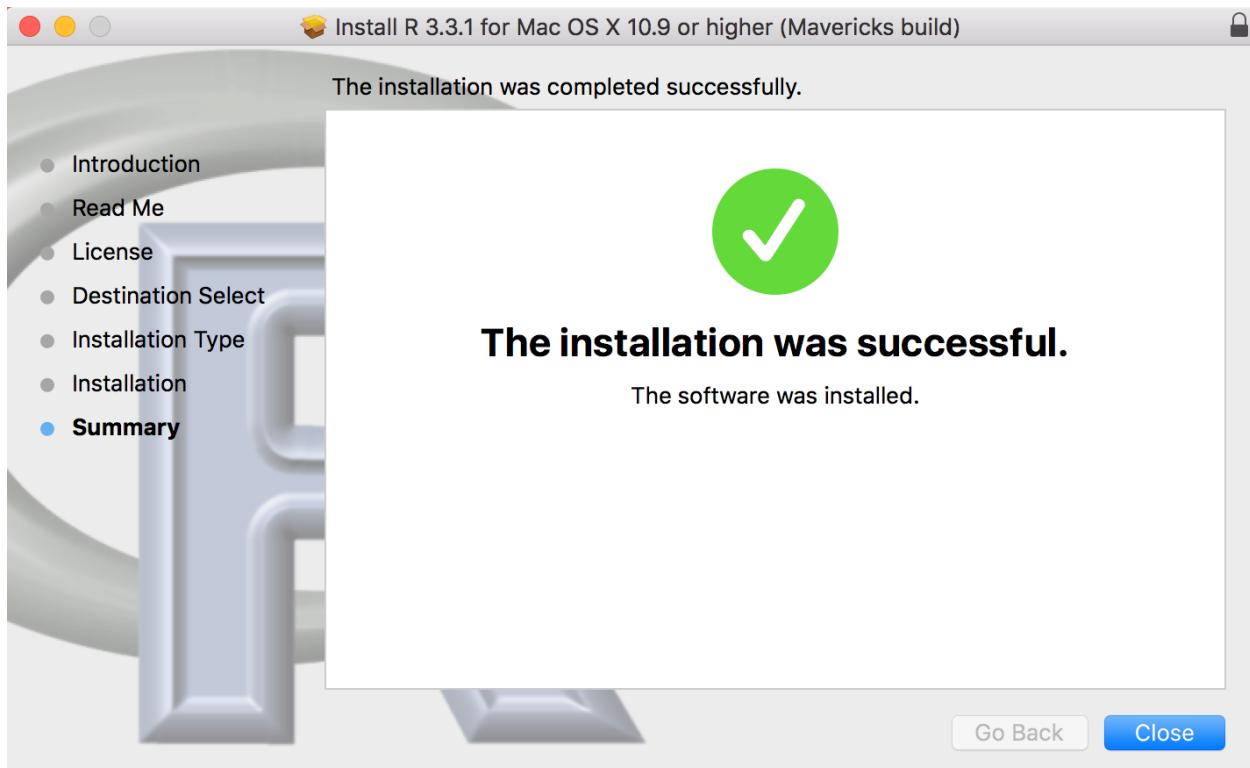
11. Digite a senha do administrador da sua máquina quando solicitado.



12. Instalação em andamento.



13. Instalação do R concluída com sucesso. Agora vamos instalar o RStudio.



14. Acesse o endereço: <https://www.rstudio.com>. Clique no botão “Download RStudio” para fazer o download do RStudio.

The screenshot shows the RStudio website homepage. At the top, there's a navigation bar with links for Products, Resources, Pricing, About Us, and Blog, along with a search icon. The main header features the RStudio logo and the text "Welcome to RStudio - Open source and enterprise-ready professional software for R". Below the header are three buttons: "Download RStudio", "Discover Shiny", and "shinyapps.io Login". To the right is a large blue circular graphic with a white "R" inside. Below the main section are three smaller cards: one about the IDE, one about R Packages, and one about Shiny.

Welcome to RStudio - Open source and enterprise-ready professional software for R

Download RStudio   Discover Shiny   shinyapps.io Login

Powerful IDE for R

R Packages

Bring R to the web

15. Clique no link RStudio Desktop.

The screenshot shows the RStudio website at <https://www.rstudio.com/products/RStudio/>. The main heading is "Take control of your R code". Below it, a paragraph describes RStudio as an integrated development environment (IDE) for R, mentioning its features like a console, syntax-highlighting editor, direct code execution, plotting tools, history, debugging, and workspace management. A link "Click here to see more RStudio features." is provided. Another paragraph states that RStudio is available in open source and commercial editions and runs on desktop (Windows, Mac, and Linux) or in a browser connected to RStudio Server or RStudio Server Pro (Debian/Ubuntu, RedHat/CentOS, and SUSE Linux). On the left, there are two main sections: "Desktop" (with a user icon, "Run RStudio on your desktop", and a link "RStudio Desktop >") and "Server" (with a group icon, "Centralize access and computation", and a link "RStudio Server >"). On the right, there is a video player showing a video titled "01:31" with the RStudio logo and a "CLICK HERE TO SEE ADDITIONAL FEATURES" button.

16. Clique no botão “Download RStudio Desktop” para fazer o download.

The screenshot shows the RStudio website at <https://www.rstudio.com/products/RStudio/#Desktop>. The page compares the Open Source Edition and Commercial License. The Open Source Edition features include:

- Access RStudio locally
- Syntax highlighting, code completion, and smart indentation
- Execute R code directly from the source editor
- Quickly jump to function definitions
- Easily manage multiple working directories using projects
- Integrated R help and documentation
- Interactive debugger to diagnose and fix errors quickly
- Extensive package development tools

The Commercial License includes all of the open source features plus:

- A commercial license for organizations not able to use AGPL software
- Access to priority support

Comparison table:

Support	Community forums only	Priority Email Support 8 hour response during business hours (ET)
License	AGPL v3	<a href="#">RStudio License Agreement</a>
Pricing	Free	\$995/year

Buttons at the bottom: DOWNLOAD RSTUDIO DESKTOP (blue), BUY NOW (blue), and a navigation icon (up arrow).

## 17. Selecione o RStudio 0.99.902 para Mac OS X.

RStudio is a set of integrated tools designed to help you be more productive with R. It includes a console, syntax-highlighting editor that supports direct code execution, as well as tools for plotting, history, debugging and workspace management.

If you run R on a Linux server and want to enable users to remotely access RStudio using a web browser [please download RStudio Server](#).

**Do you need support or a commercial license?** Check out our commercial offerings

**RStudio Desktop 0.99.902 — Release Notes**

RStudio requires R 2.11.1 (or higher). If you don't already have R, you can download it [here](#).

**Installers for Supported Platforms**

Installers	Size	Date	MD5
RStudio 0.99.902 - Windows Vista/7/8/10	77.1 MB	2016-05-14	<a href="#">8feae61d13b1d81ded7587a1da760d95</a>
RStudio 0.99.902 - Mac OS X 10.6+ (64-bit)	60 MB	2016-05-14	<a href="#">f741e4a1345985c16e692967adbad20</a>
RStudio 0.99.902 - Ubuntu 12.04+/Debian 8+ (32-bit)	81.6 MB	2016-05-14	<a href="#">363952616a10553aa51f3a9129b9adeb</a>
RStudio 0.99.902 - Ubuntu 12.04+/Debian 8+ (64-bit)	88.3 MB	2016-05-14	<a href="#">d035622f39928246048972ed2064c89a</a>
RStudio 0.99.902 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	81 MB	2016-05-14	<a href="#">6f14d4717b01e7763d18f1cdad8e6474</a>
RStudio 0.99.902 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	81.9 MB	2016-05-14	<a href="#">af9e8cd892a497a92aafee8629f90e90</a>

**Zip/Tarballs**

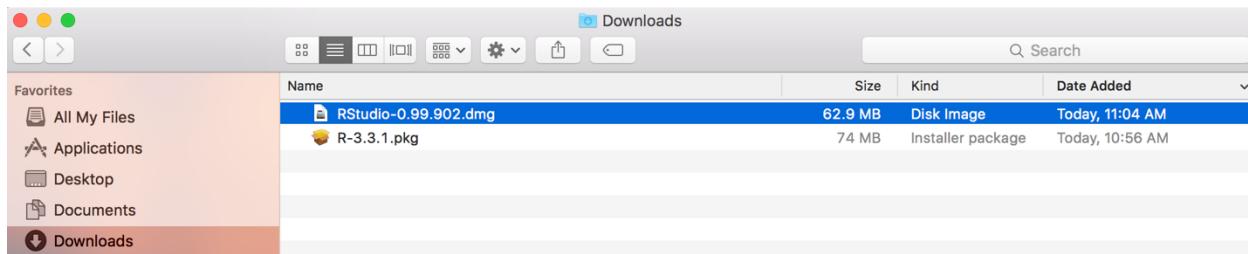
Zip/tar archives	Size	Date	MD5
RStudio 0.99.902 - Windows Vista/7/8/10	110.6 MB	2016-05-14	<a href="#">efbc09f98fd516cb39933ab1a4fddb01</a>
RStudio 0.99.902 - Ubuntu 12.04+/Debian 8+ (32-bit)	82.3 MB	2016-05-14	<a href="#">3d66491350c64c86eabcd49e05f9d20</a>

## 18. Download em andamento.

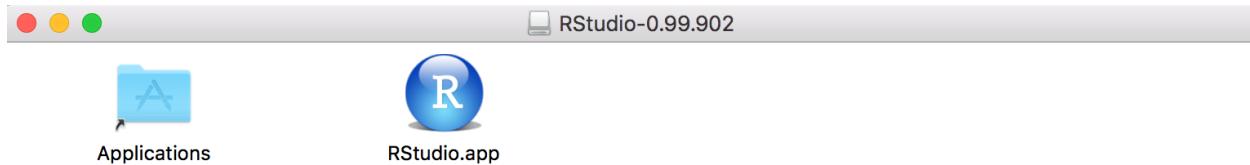
The screenshot shows the RStudio download page at <https://www.rstudio.com/products/rstudio/download/>. A large downward-pointing arrow on the left side indicates the progress of a download. At the top, there's a navigation bar with links for Products, Resources, Pricing, About Us, Blog, and a search icon. Below the navigation, there's a promotional banner for RStudio Server with the text "CURIOUS WHY COMPANIES UPGRADED?" and logos for various partners like ANUGA, 2U, and DTCC. To the right of the banner is a call-to-action button for Shiny: "Share your R code on the web with Shiny Click here to learn more". The main content area is titled "Installers for Supported Platforms" and lists several installer files with their sizes, dates, and MD5 checksums. A progress bar at the bottom shows "10.6/60.0 MB, 18 secs left" for the download of "RStudio-0.99.902.dmg".

Installers	Size	Date	MD5
RStudio 0.99.902 - Windows Vista/7/8/10	77.1 MB	2016-05-14	8feae61d13b1d81ded7587a1da760d95
RStudio 0.99.902 - Mac OS X 10.6+ (64-bit)	60 MB	2016-05-14	f741e4a1345985c16e692967adbad210
RStudio 0.99.902 - Ubuntu 12.04+/Debian 8+ (32-bit)	81.6 MB	2016-05-14	363952616a10553aa51f3a9129b9adef
RStudio 0.99.902 - Ubuntu 12.04+/Debian 8+ (64-bit)	88.3 MB	2016-05-14	d035622ff39928246048972ed2064c89a
RStudio 0.99.902 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	81 MB	2016-05-14	6f14d4717b01e7763d18fc1cad8e6474
RStudio 0.99.902 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	81.9 MB	2016-05-14	af9e8cd892a497a92aaf8e8629f90e90

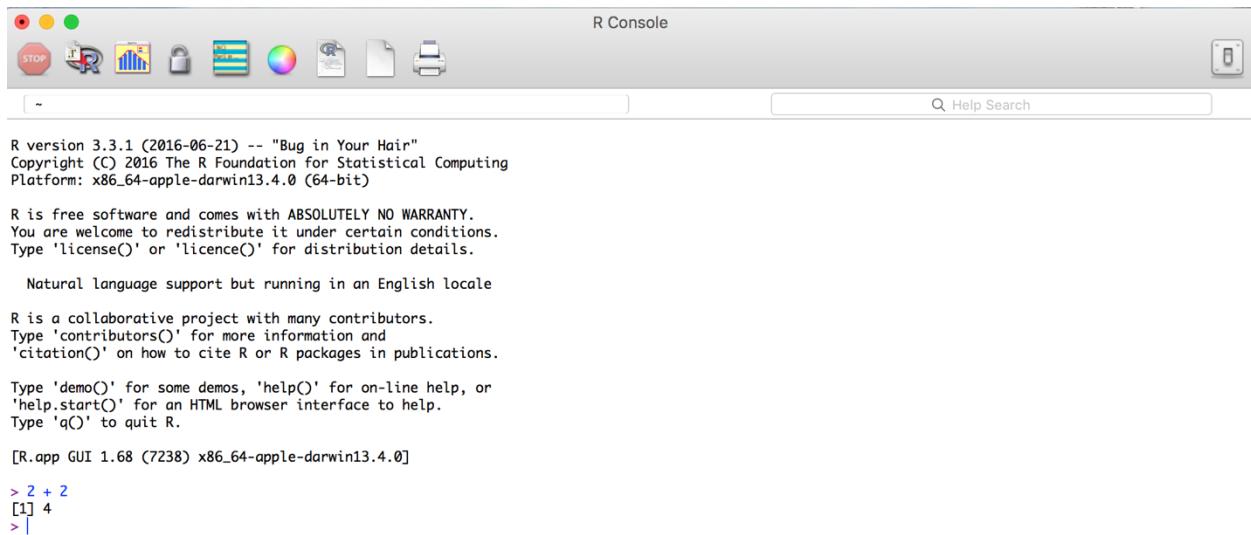
19. Será feito o download de um arquivo com extensão .dmg.



20. Para instalar o RStudio, basta arrastar o arquivo RStudio.app para a pasta Applications.



## 21. Testando a instalação do R. Console instalado com sucesso!



R version 3.3.1 (2016-06-21) -- "Bug in Your Hair"  
Copyright (C) 2016 The R Foundation for Statistical Computing  
Platform: x86\_64-apple-darwin13.4.0 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.  
You are welcome to redistribute it under certain conditions.  
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

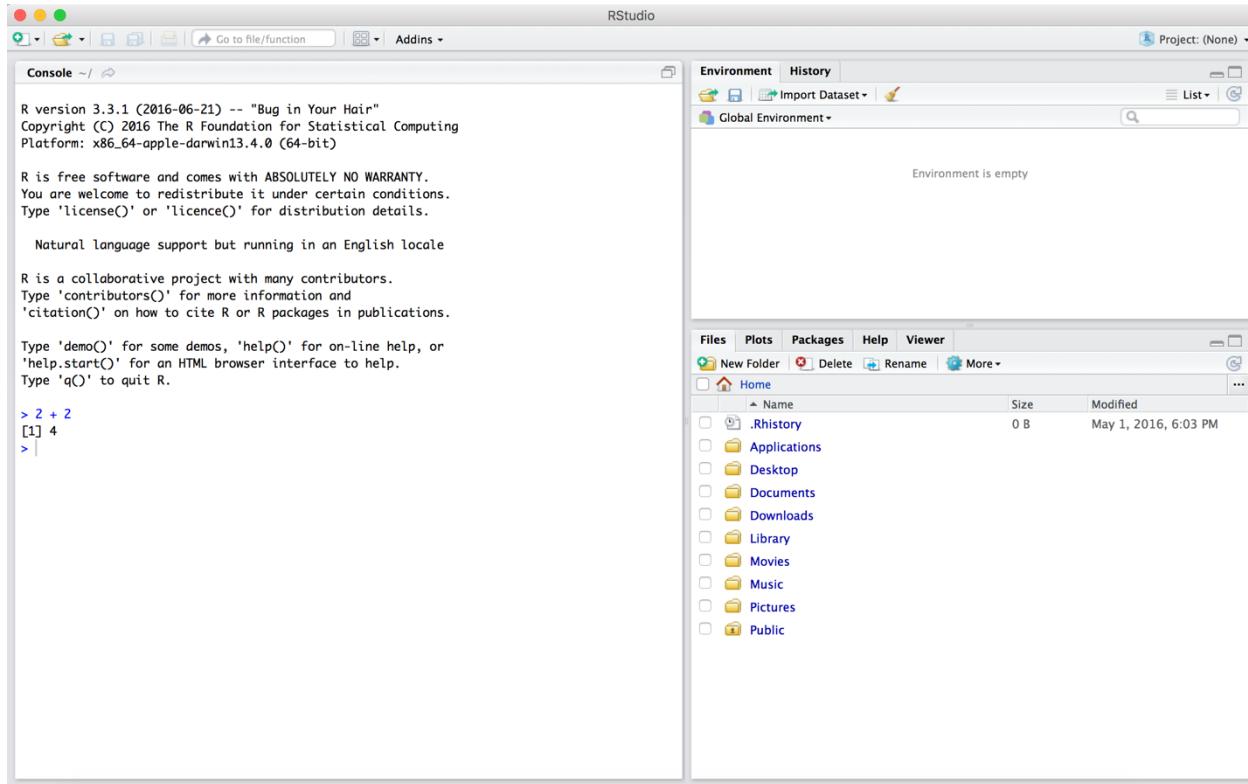
R is a collaborative project with many contributors.  
Type 'contributors()' for more information and  
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or  
'help.start()' for an HTML browser interface to help.  
Type 'q()' to quit R.

[R.app GUI 1.68 (7238) x86\_64-apple-darwin13.4.0]

```
> 2 + 2
[1] 4
> |
```

22. Testando a instalação do RStudio. Instalação feita com sucesso!



Parabéns!

Sua máquina está pronta para iniciar o curso!