

# Installing R and RStudio

macOS

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## Installing R and RStudio

This guide walks you through installing **R** (the programming language) and **RStudio** (the integrated development environment, IDE) on your computer. Please follow the steps carefully **in the order shown**.

**Important:** R and RStudio are separate programs. You must install **R** first, then **RStudio**.

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### 1. What You Will Install

- **R:** The statistical computing language that runs your code
- **RStudio:** A user-friendly interface that makes working with R much easier

Both are **free and open source**.

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### 2. Check Your Operating System

Before starting, confirm which operating system you are using. This guide is specific to **macOS**.

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### 3. Installation workflow

As of today, the latest stable version of R is 4.5.2. It is possible that when you actually use this guide, the version number might differ slightly. That should not be a problem and should not change this workflow.

### 3.1. Install R on macOS

1. Go to:

<https://cran.r-project.org>

#### 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](#) ([Debian](#), [Fedora/Redhat](#), [Ubuntu](#))
- [Download R for macOS](#)
- [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.

2. Click **Download R for (macOS)**.
3. Download the **.pkg** file recommended for your macOS version.

#### Latest release:

For Apple silicon (M1,2,...) Macs: **R 4.5.2** binary for macOS 11 (**Big Sur**) and higher, signed and notarized packages.

[R-4.5.2-arm64.pkg](#)  
SHA1-  
hash: 1cc0b3d78bc3b3857c6bf3128a9d414b130d938e  
(ca. 97MB, notarized and signed)

Contains R 4.5.2 framework, R.app GUI 1.82, Tcl/Tk 8.6.12 X11 libraries and Texinfo 6.8. The latter two components are optional and can be omitted when choosing "custom install", they are only needed if you want to use the `tcltk` R package or build package documentation from sources.

For older Intel Macs:

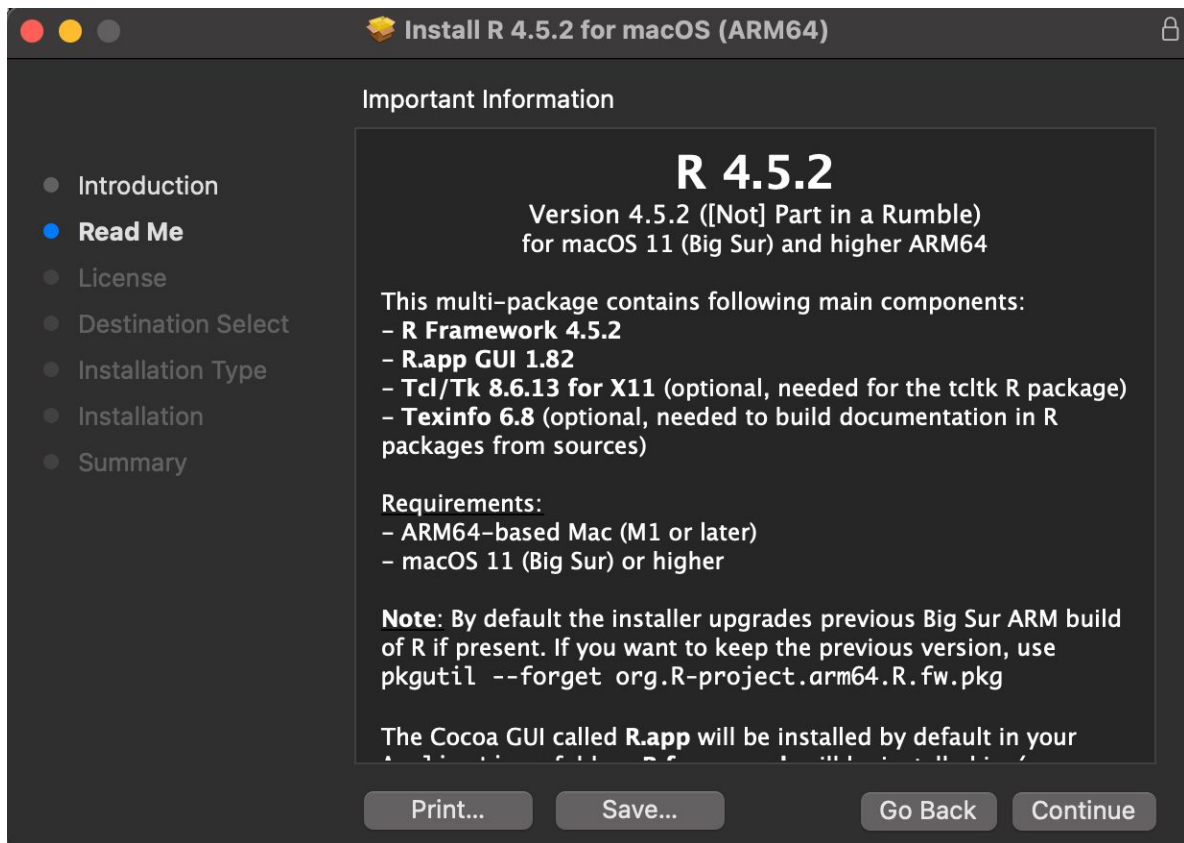
[R-4.5.2-x86\\_64.pkg](#)  
SHA1-  
hash: 0184504a11da63b26cc31f91a812e5456d523e0e  
(ca. 100MB, notarized and signed)

macOS Ventura users: there is a known bug in Ventura preventing installations from some locations without a prompt. If the installation fails, move the downloaded file away from the *Downloads* folder (e.g., to your home or Desktop).

Note: the use of X11 (including `tcltk`) requires [XQuartz](#) (version 2.8.5 or later). Always re-install XQuartz when upgrading your macOS to a new major version.

This release uses Xcode 16.2/arm64/14.2(x86\_64) and GNU Fortran 14.2. If you wish to compile R packages which contain Fortran code, you may need to download the corresponding GNU Fortran compiler from <https://mac.R-project.org/tools>. Any external libraries and tools are expected to live in `/opt/R/arm64` (Apple silicon) or `/opt/R/x86_64` (Intel).

4. Double-click the downloaded **.pkg** file.
5. Follow the installation steps and accept the defaults.



6. Finish the installation

**Note:** On Apple Silicon (M1/M2/M3) Macs, use the version labeled *Apple silicon arm64* if available.

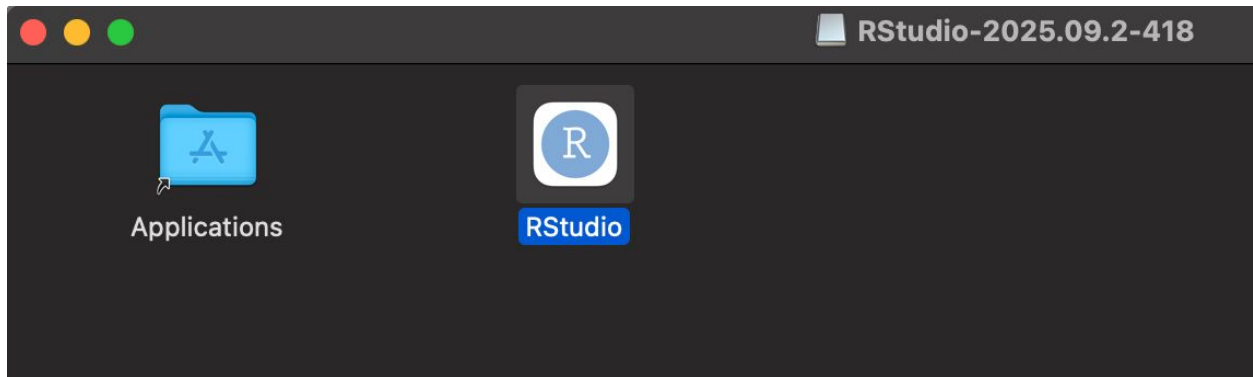
### 3.2. Install RStudio on macOS

1. Go to:  
<https://posit.co/download/rstudio-desktop/>
2. Scroll down to the installer table

OS	Download	Size	SHA-256
Windows 10/11	<a href="#">RSTUDIO-2025.09.2-418.EXE ↕</a>	296.74 MB	<a href="#">439D3200</a>
macOS 13+	<a href="#">RSTUDIO-2025.09.2-418.DMG ↕</a>	656.36 MB	<a href="#">9D1719CE</a>
Ubuntu 22/Debian 12	<a href="#">RSTUDIO-2025.09.2-418-AMD64.DEB ↕</a>	226.04 MB	<a href="#">1ECA6CA3</a>

3. Under **Download**, click **RStudio-2025.09.2-418.dmg**. (the RStudio version might be slightly different depending on when you are reading this, but the logic is the same)

4. Download the macOS .dmg file.
5. Open the .dmg file.
6. Drag **RStudio** into the **Applications** folder.



7. Eject the disk image.
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## 4. Common Issues and Fixes

### RStudio Does Not Open

- Make sure R is installed **before** RStudio
- Restart your computer

### Permission Errors (macOS)

- You may need administrator privileges
  - On macOS, check **System Settings** → **Privacy & Security**
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You are now ready to start using R and RStudio for this course.