

Guide to downloading R and RStudio

1. DOWNLOADING R

- Go to <https://www.r-project.org/> and click on "download R" as shown in the figure below

The R Project for Statistical Computing

Getting Started

R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. [to download R](#), please choose your preferred CRAN mirror.

If you have questions about R like how to download and install the software, or what the license terms are, please read our [answers to frequently asked questions](#) before you send an email.

News

- **R version 4.1.2 (Bird Hippie)** has been released on 2021-11-01.
- **R version 4.0.5 (Shake and Throw)** was released on 2021-03-31.
- Thanks to the organisers of useR! 2020 for a successful online conference. Recorded tutorials and talks from the conference are available on the [R Consortium YouTube channel](#).
- You can support the R Foundation with a renewable subscription as a [supporting member](#)

News via Twitter

[News from the R Foundation](#)

- A page with the following URL will open: <https://cran.r-project.org/mirrors.html>, where possible windows to download R are shown.

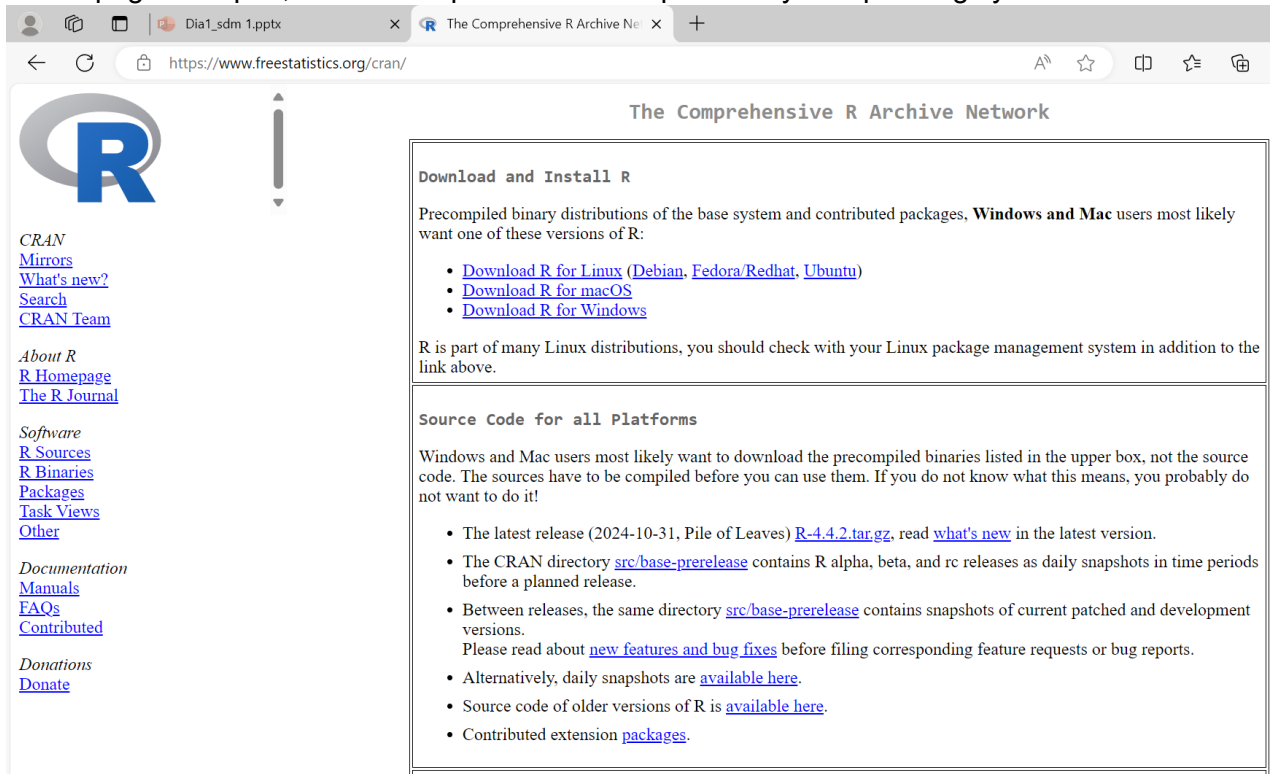
CRAN Mirrors

The Comprehensive R Archive Network is available at the following URLs, please choose a location close to you. Some statistics on the status of the mirrors can be found here: [main page](#), [windows release](#), [windows old release](#).

If you want to host a new mirror at your institution, please have a look at the [CRAN Mirror HOWTO](#).

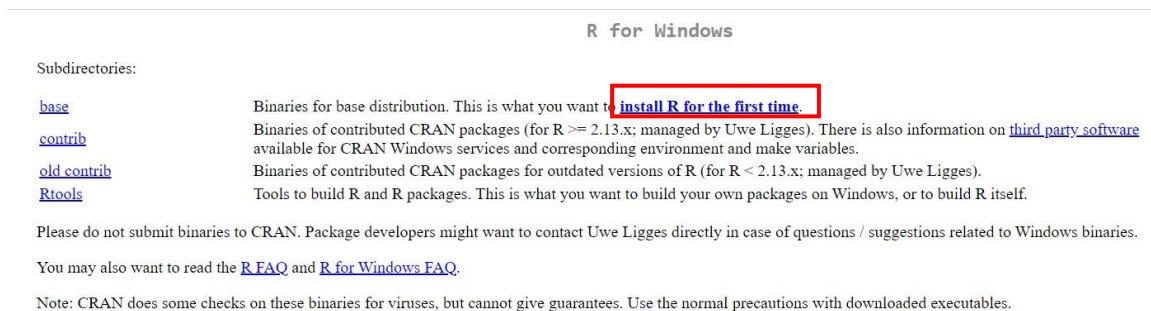
0-Cloud	https://cloud.r-project.org/	Automatic redirection to servers worldwide, currently sponsored by Rstudio
Algeria	https://cran.uathb.dz/	University of Science and Technology Houari Boumediene
Argentina	http://mirror.fcaglp.unlp.edu.ar/CRAN/	Universidad Nacional de La Plata

- A new page will open, locate the option that corresponds to your operating system



The screenshot shows the CRAN website at <https://www.freestats.org/cran/>. The page title is "The Comprehensive R Archive Network". On the left, there is a sidebar with links: CRAN, Mirrors, What's new?, Search, CRAN Team, About R, R Homepage, The R Journal, Software, R Sources, R Binaries, Packages, Task Views, Other, Documentation, Manuals, FAQs, Contributed, Donations, and Donate. The main content area has a section titled "Download and Install R" which states: "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 list of links: "Download R for Linux (Debian, Fedora/Redhat, Ubuntu)", "Download R for macOS", and "Download R for Windows". Below this, it says "R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above." There is also a section titled "Source Code for all Platforms" which states: "Windows and Mac users most likely want to download the precompiled binaries listed in the upper box, not the source code. The sources have to be compiled before you can use them. If you do not know what this means, you probably do not want to do it!" followed by a list of links: "The latest release (2024-10-31, Pile of Leaves) [R-4.4.2.tar.gz](#), read [what's new](#) in the latest version.", "The CRAN directory [src/base-prerelease](#) contains R alpha, beta, and rc releases as daily snapshots in time periods before a planned release.", "Between releases, the same directory [src/base-prerelease](#) contains snapshots of current patched and development versions. Please read about [new features and bug fixes](#) before filing corresponding feature requests or bug reports.", "Alternatively, daily snapshots are [available here](#).", "Source code of older versions of R is [available here](#).", and "Contributed extension [packages](#)."

- When clicking on the appropriate option, a page will open showing the subdirectories: base, contrib, old contrib, and Rtools. Please click on "install R for the first time"



The screenshot shows the "R for Windows" page. The title is "R for Windows". Below the title, it says "Subdirectories:". There is a list of subdirectories: [base](#), [contrib](#), [old contrib](#), and [Rtools](#). To the right of each subdirectory, there is a description: "Binaries for base distribution. This is what you want to [install R for the first time](#)." (the link is highlighted with a red box), "Binaries of contributed CRAN packages (for R >= 2.13.x; managed by Uwe Ligges). There is also information on [third party software](#) available for CRAN Windows services and corresponding environment and make variables.", "Binaries of contributed CRAN packages for outdated versions of R (for R < 2.13.x; managed by Uwe Ligges).", and "Tools to build R and R packages. This is what you want to build your own packages on Windows, or to build R itself." Below the subdirectories, it says: "Please do not submit binaries to CRAN. Package developers might want to contact Uwe Ligges directly in case of questions / suggestions related to Windows binaries." and "You may also want to read the [R FAQ](#) and [R for Windows FAQ](#)." At the bottom, it says: "Note: CRAN does some checks on these binaries for viruses, but cannot give guarantees. Use the normal precautions with downloaded executables."

- A new page will open and show the file to download in "Download R 4.4.2 for Windows". Click and the file download will begin

R-4.4.2 for Windows

[Download R-4.4.2 for Windows](#) (83 megabytes, 64 bit)

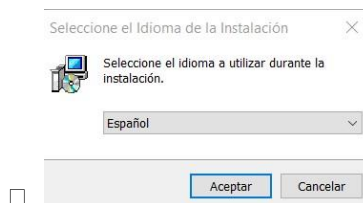
[README on the Windows binary distribution](#)

[New features in this version](#)

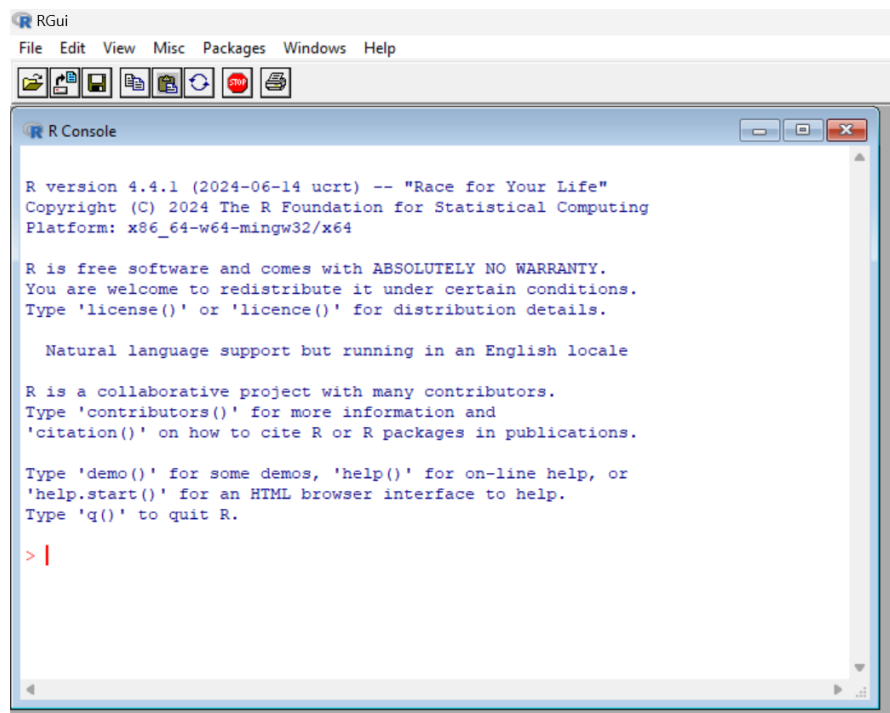
This build requires UCRT, which is part of Windows since Windows 10 and Windows Server 2016. On older systems, UCRT has to be installed manually from [here](#).

If you want to double-check that the package you have downloaded matches the package distributed by CRAN, you can compare the [md5sum](#) of the .exe to the [fingerprint](#) on the master server.

- Download the file and install it by clicking Accept



- When opening R, it will have the following appearance:



2. RSTUDIO DOWNLOADING

RStudio is an integrated development environment, that is, software that integrates various tools for agile script development such as editor, code indentation, development of new packages, etc.

- To download, go to <https://posit.co/download/rstudio-desktop/> and explore the page

1: Install R

RStudio requires R 3.6.0+. Choose a version of R that matches your computer's operating system.

R is not a Posit product. By clicking on the link below to download and install R, you are leaving the Posit website. Posit disclaims any obligations and all liability with respect to R and the R website.

DOWNLOAD AND INSTALL R

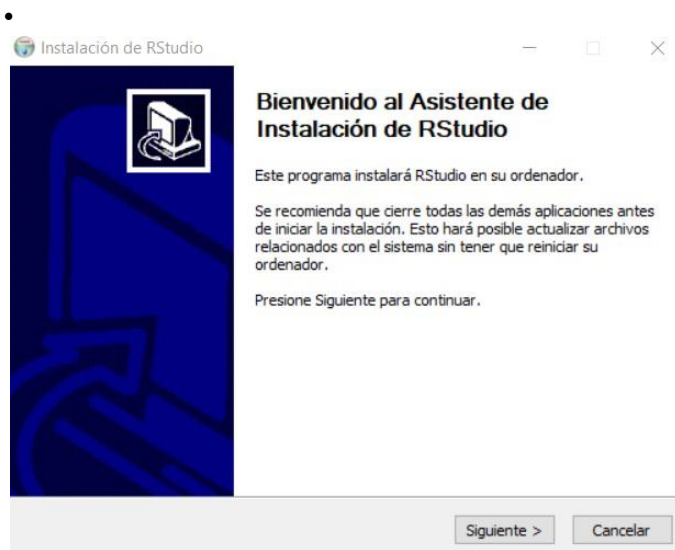
2: Install RStudio

DOWNLOAD RSTUDIO DESKTOP FOR WINDOWS

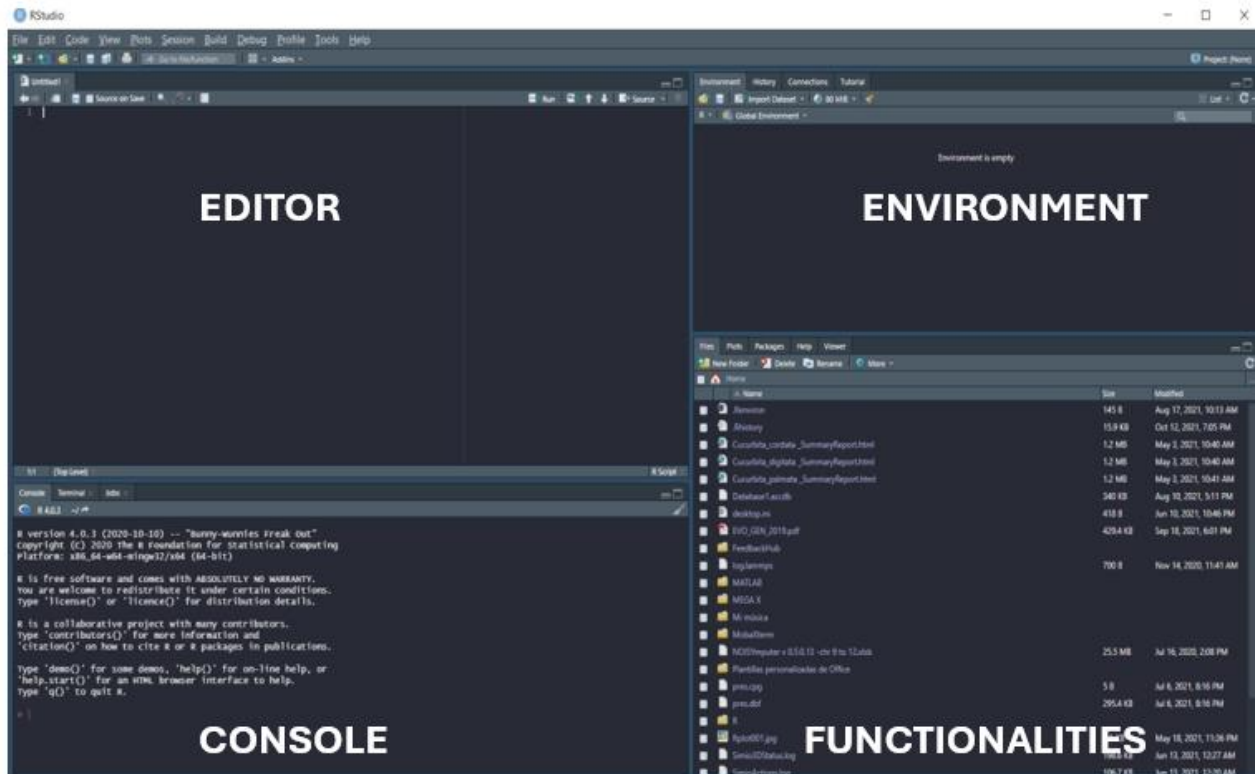
Size: 265.27 MB | [SHA-256: 5EFCD188](#) | Version: 2024.12.0+467 | Released: 2024-12-16

- Click on DOWNLOAD. This will download an installation file from the link <https://download1.rstudio.org/electron/windows/RStudio-2024.12.0-467.exe>


Para instalarlo, abra el archivo descargado y dé click en siguiente, una serie de ventanas se abrirá, por favor de click en siguiente o en aceptar.

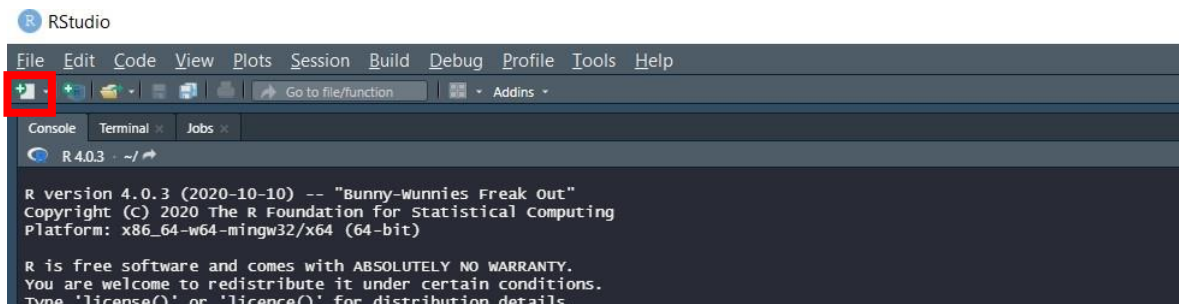


Once RStudio is installed, when opening the program it will look like this. The program has four panels: editor, where the code to be run is written, in the console panel, functions and code are run, in the environment panel you will find the files that are in the computer's memory, and finally in the lower panel, there is a functionality panel where you will find various options to use alongside R such as files, graphics, help, or a viewer to visualize interactive graphics.

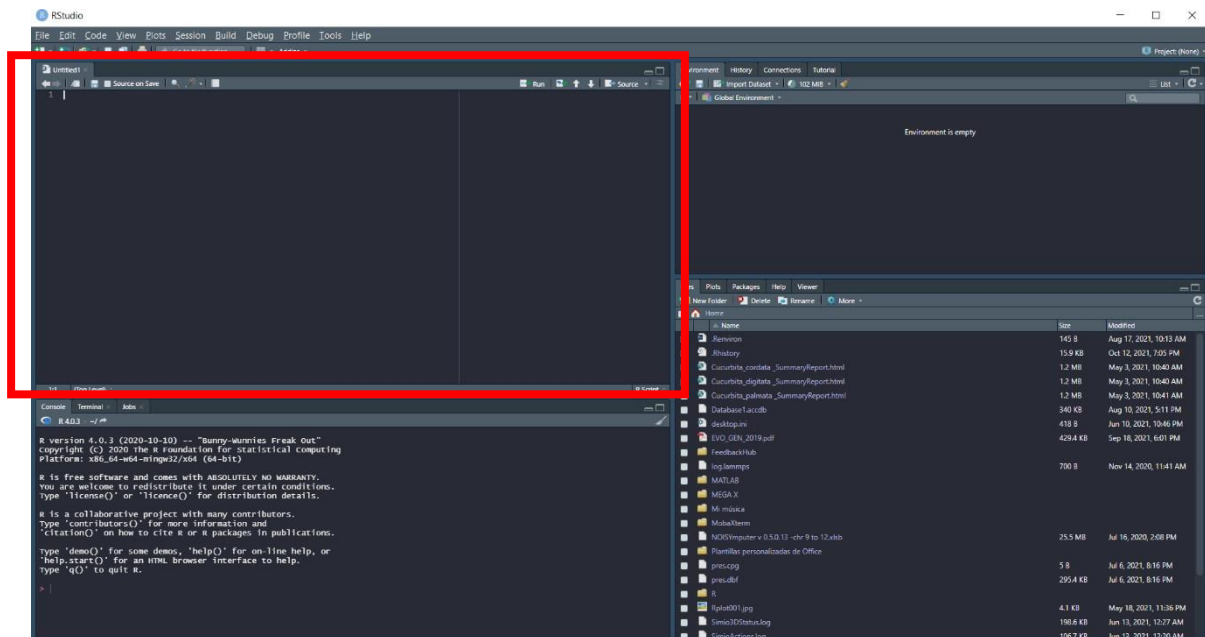


3. INSTALLING LIBRARIES FROM CRAN AND BIOCONDUCTOR

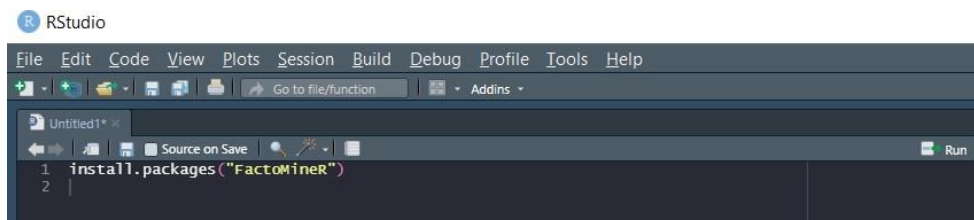
- Once you have R and RStudio installed, you can install packages, that is, the programs that run in R. For this, open RStudio and click on the icon , which will open a new text editor.



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- The new editor will look like this: :



- To install packages, you must know which repository contains the desired package. The two most important repositories are CRAN and Bioconductor, however packages can also be installed from GitHub. To install a package from CRAN, write `install.packages("PACKAGE NAME")`, for example, `install.packages("FactoMineR")` and click RUN or if you prefer using the keyboard, use CTRL + ENTER:



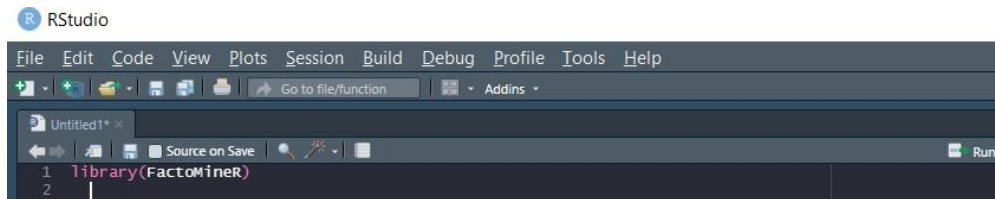
- An installation message will appear showing that the package was installed

```
> install.packages("FactoMineR")
Installing package into 'C:/Users/cami_/Documents/R/win-library/4.0'
(as 'lib' is unspecified)
trying URL 'https://cran.rstudio.com/bin/windows/contrib/4.0/FactoMineR_2.4.zip'
Content type 'application/zip' length 3758758 bytes (3.6 MB)
downloaded 3.6 MB

package 'FactoMineR' successfully unpacked and MD5 sums checked

The downloaded binary packages are in
C:\Users\cami_\AppData\Local\Temp\RtmpERgsPi\downloaded_packages
> |
```

- To use the package, `library("PACKAGE NAME")`, for example, to use the FactoMineR package, use `library(FactoMineR)` and click RUN again



- To install from Bioconductor, go to the Bioconductor package page, <https://bioconductor.org/packages/release/bioc/html/methylKit.html>. In this case, instead of using the `install.packages` function, you will use the following instructions:

```
if (!requireNamespace("BiocManager", quietly = TRUE)) install.packages("BiocManager")

BiocManager::install("methylKit")
```

4. INSTALLATION OF LIBRARIES FROM GITHUB

- To install R packages from GitHub, you must install the devtools package and use the following instruction which details the GitHub repository from where the package will be downloaded, for example GapAnalysis

```
library(devtools)
remotes::install_github("ccsosa/GapAnalysis")
```