

Instalación de R/RStudio

GUIÓN

- Instalación de R
- Instalación de RStudio
- Instalación de paquetes necesarios
- Complementos



Nota: a la hora de seguir esta guía, si encontráis algún problema durante la instalación, podéis preguntar a vuestro servicio de informática o bien contactar conmigo a través de correo electrónico (mramon@jccm.es)

Instalación de R

1. Ir a la página del proyecto R (www.r-project.org) y descargarse la versión correspondiente al sistema operativo con el que trabajamos (Windows, Linux o OSX)
2. Elegir servidor de descarga y tipo versión del sistema operativo (32 o 64-bit)
3. Ejecutar el instalador (IMPORTANTE tener permisos de administrador para instalarlo. Si no dispones de ellos, pregunta al servicio de informática)

The screenshot shows the official website for The R Project for Statistical Computing. The URL in the browser bar is r-project.org. The page features a large logo on the left and a main content area on the right.

Main Content Area:

- Section Header:** The R Project for Statistical Computing
- Section Header:** Getting Started
- Text:** 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](#).
- Text:** 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.
- Section Header:** News
- List:**
 - [R version 4.0.5 \(Shake and Throw\) prerelease versions](#) will appear starting Wednesday 2021-03-24. Final release is scheduled for Wednesday 2021-03-31.
 - [R version 4.0.4 \(Lost Library Book\)](#) has been released on 2021-02-15.
 - 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](#).
 - [R version 3.6.3 \(Holding the Windsock\)](#) was released on 2020-02-29.
 - You can support the R Foundation with a renewable subscription as a [supporting member](#)

Sidebar Navigation:

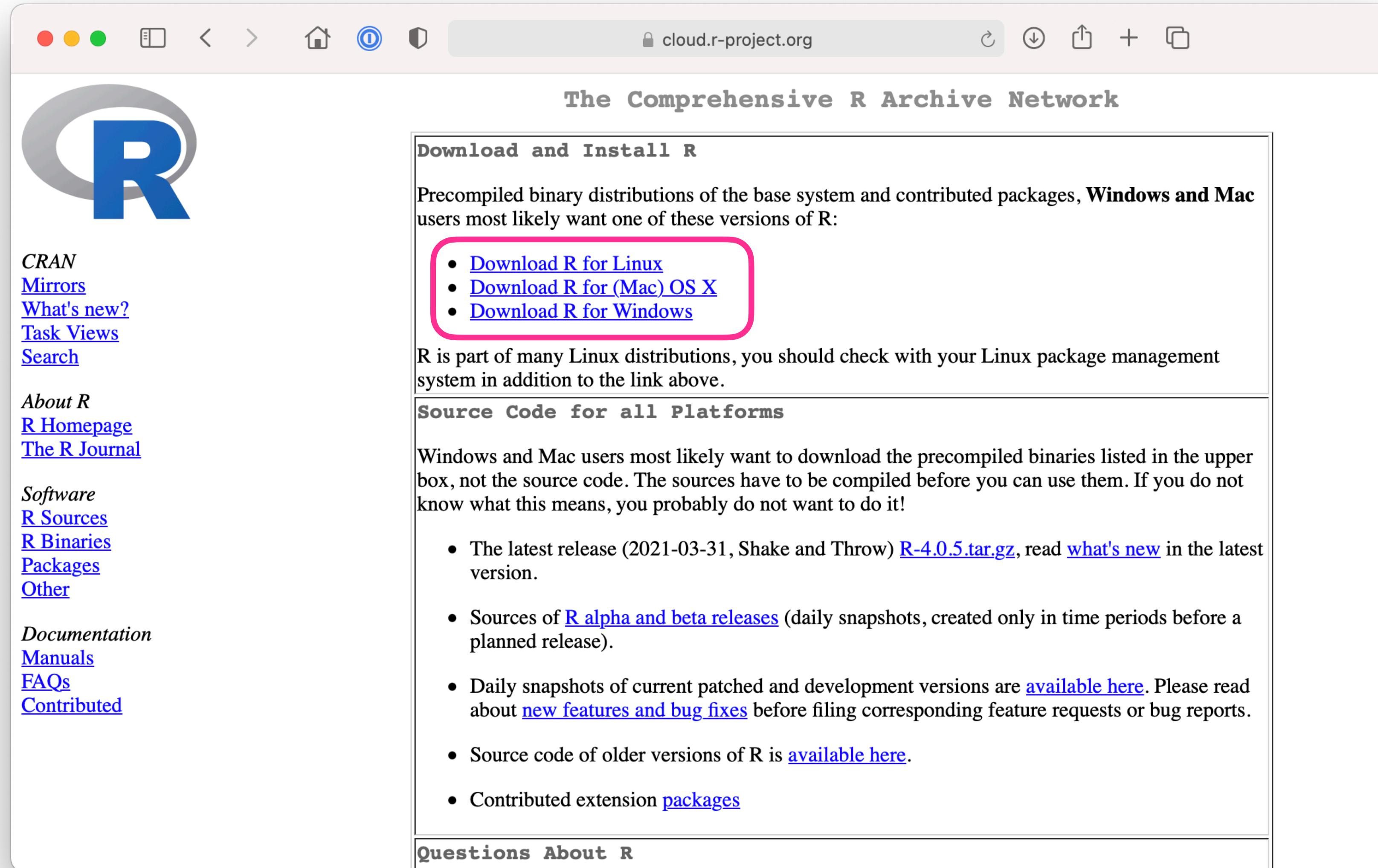
- [Home]
- Download CRAN** (highlighted with a blue arrow and pink border)
- R Project
 - About R
 - Logo
 - Contributors
 - What's New?
 - Reporting Bugs
 - Conferences
 - Search
 - Get Involved: Mailing Lists
 - Developer Pages
 - R Blog
- R Foundation
 - Foundation Board Members

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](#).

Location	Mirror URL	Description
0-Cloud	https://cloud.r-project.org/	Automatic redirection to servers worldwide, currently sponsored by Rstudio
Algeria	https://cran.usthb.dz/	University of Science and Technology Houari Boumediene
Argentina	http://mirror.fcaglp.unlp.edu.ar/CRAN/	Universidad Nacional de La Plata
Australia	https://cran.csiro.au/ https://mirror.aarnet.edu.au/pub/CRAN/ https://cran.ms.unimelb.edu.au/ https://cran.curtin.edu.au/	CSIRO AARNET School of Mathematics and Statistics, University of Melbourne Curtin University
Austria	https://cran.wu.ac.at/	Wirtschaftsuniversität Wien
Belgium	https://www.freestatistics.org/cran/ https://ftp.belnet.be/mirror/CRAN/	Patrick Wessa Belnet, the Belgian research and education network
Brazil	https://nbcgib.uesc.br/mirrors/cran/ https://cran-r.c3sl.ufpr.br/ https://cran.fiocruz.br/ https://vps.fmvz.usp.br/CRAN/	Computational Biology Center at Universidade Estadual de Santa Cruz Universidade Federal do Paraná Oswaldo Cruz Foundation, Rio de Janeiro University of São Paulo, São Paulo

Elegimos un servidor del que descargar el programa. Podemos elegir cualquiera, normalmente el servidor que mantiene *RStudio* o el correspondiente a nuestro país



The screenshot shows a web browser window displaying the CRAN (Comprehensive R Archive Network) homepage. The URL in the address bar is `cloud.r-project.org`. The page features the CRAN logo (a stylized 'R' inside a circle) and a sidebar with various links like 'CRAN', 'Mirrors', 'What's new?', 'Task Views', 'Search', 'About R', 'R Homepage', 'The R Journal', 'Software', 'R Sources', 'R Binaries', 'Packages', and 'Other'. The main content area is titled 'The Comprehensive R Archive Network' and contains sections for 'Download and Install R' and 'Source Code for all Platforms'. The 'Download and Install R' section provides links for Linux, Mac OS X, and Windows users, with the Linux links highlighted by a pink rounded rectangle. The 'Source Code for all Platforms' section lists various sources and versions of R, including alpha/beta releases, daily snapshots, and source code for older versions. A 'Questions About R' section is also present at the bottom.

The Comprehensive R Archive Network

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](#)
- [Download R for \(Mac\) OS X](#)
- [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.

Source Code for all Platforms

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!

- The latest release (2021-03-31, Shake and Throw) [R-4.0.5.tar.gz](#), read [what's new](#) in the latest version.
- Sources of [R alpha and beta releases](#) (daily snapshots, created only in time periods before a planned release).
- Daily snapshots of current patched and development versions are [available here](#). Please read about [new features and bug fixes](#) before filing corresponding feature requests or bug reports.
- Source code of older versions of R is [available here](#).
- Contributed extension [packages](#)

Questions About R

Elegimos la versión del sistema operativo con la que trabajamos

R for Windows

Subdirectories:

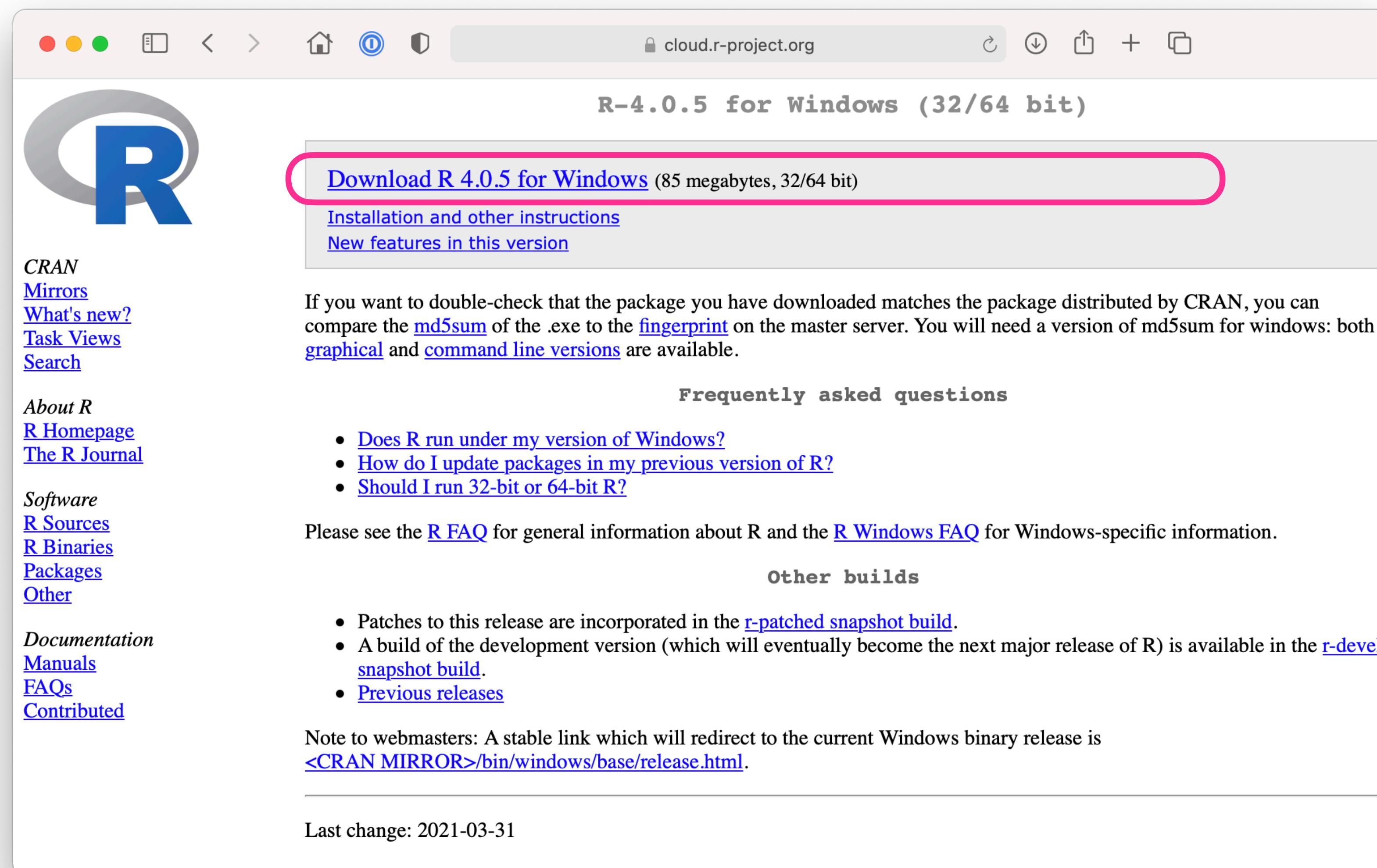
- [base](#) Binaries for base distribution. This is what you want to [install R for the first time](#).
- [contrib](#) Binaries of contributed CRAN packages (for R >= 2.13.x; managed by Uwe Ligges). There is also information on [third party software](#) available for CRAN Windows services and corresponding environment and make variables.
- [old contrib](#) Binaries of contributed CRAN packages for outdated versions of R (for R < 2.13.x; managed by Uwe Ligges).
- [Rtools](#) Tools to build R and R packages. This is what you want to build your own packages on Windows, or to build R itself.

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.

You may also want to read the [R FAQ](#) and [R for Windows FAQ](#).

Note: CRAN does some checks on these binaries for viruses, but cannot give guarantees. Use the normal precautions with downloaded executables.

Elegimos el programa base



R-4.0.5 for Windows (32/64 bit)

[Download R 4.0.5 for Windows](#) (85 megabytes, 32/64 bit)

[Installation and other instructions](#)
[New features in this version](#)

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. You will need a version of md5sum for windows: both [graphical](#) and [command line versions](#) are available.

Frequently asked questions

- [Does R run under my version of Windows?](#)
- [How do I update packages in my previous version of R?](#)
- [Should I run 32-bit or 64-bit R?](#)

Please see the [R FAQ](#) for general information about R and the [R Windows FAQ](#) for Windows-specific information.

Other builds

- Patches to this release are incorporated in the [r-patched snapshot build](#).
- A build of the development version (which will eventually become the next major release of R) is available in the [r-devel snapshot build](#).
- [Previous releases](#)

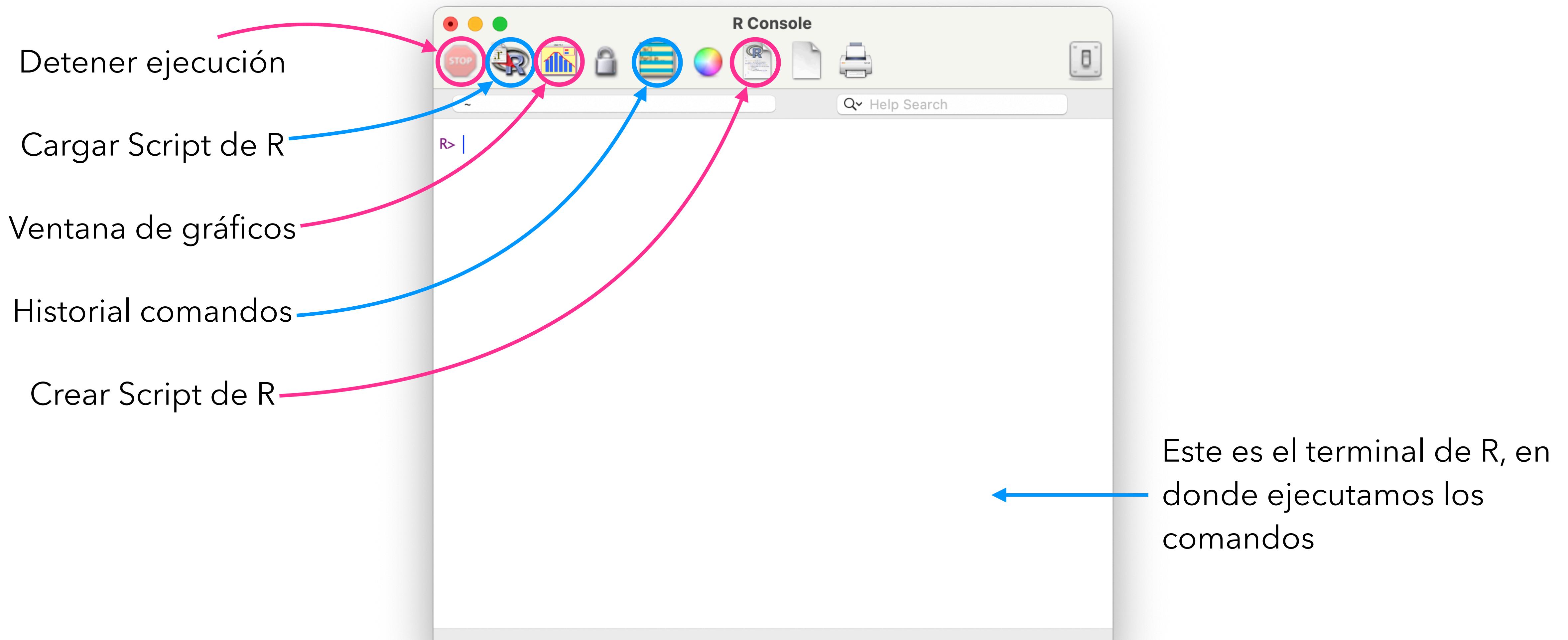
Note to webmasters: A stable link which will redirect to the current Windows binary release is
[`<CRAN MIRROR>/bin/windows/base/release.html`](#).

Last change: 2021-03-31

Descargamos el programa. En la web tenéis un enlace a instrucciones de instalación así como las características nuevas en esa versión (respecto a la anterior). También hay un apartado de FAQ

Instalación de R

4. A lo largo de la instalación, existe la posibilidad de configurar alguna cosa. En nuestro caso vamos a aceptar la configuración por defecto
5. Al finalizar, tendremos acceso al programa R
6. Aunque se puede trabajar directamente con la interfaces de R, es conveniente usar algún IDE (*integrated development environment: software para la creación de aplicaciones que combina las herramientas habituales de los desarrolladores en una única interfaz gráfica de usuario*) como RStudio

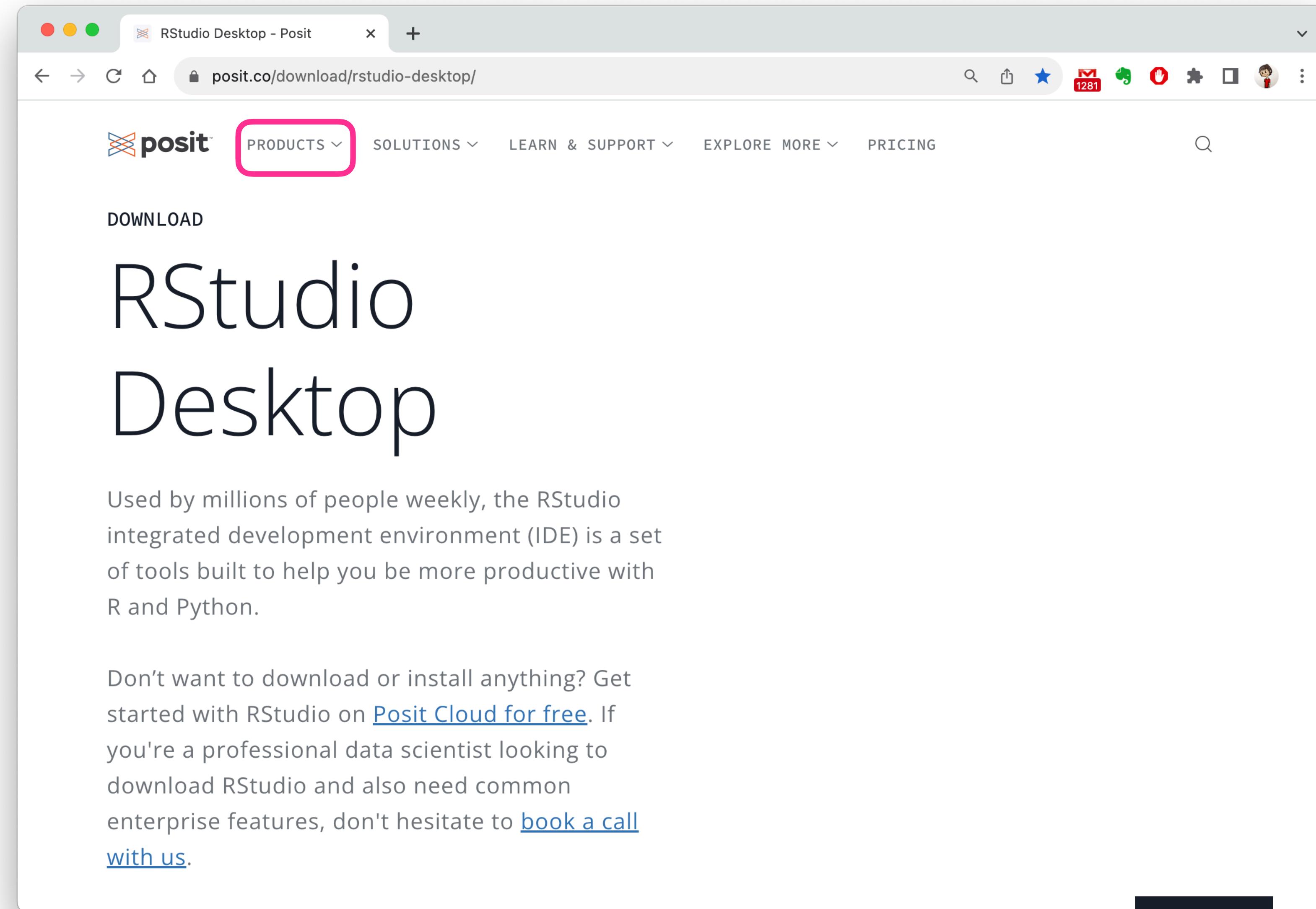


Esta es la interface gráfica de R (en OSX)

Este es el terminal de R, en donde ejecutamos los comandos

Instalación de RStudio

1. Ir a la página de RStudio (<https://www.rstudio.com>) y descargarse la versión correspondiente al sistema operativo con el que trabajamos (Windows, Linux o OSX)
2. Elegir la versión gratuita de RStudio
3. Ejecutar el instalador (IMPORTANTE tener permisos de administrador para instalarlo. Si no dispones de ellos, pregunta al servicio de informática)



RStudio Desktop - Posit

posit.co/download/rstudio-desktop/

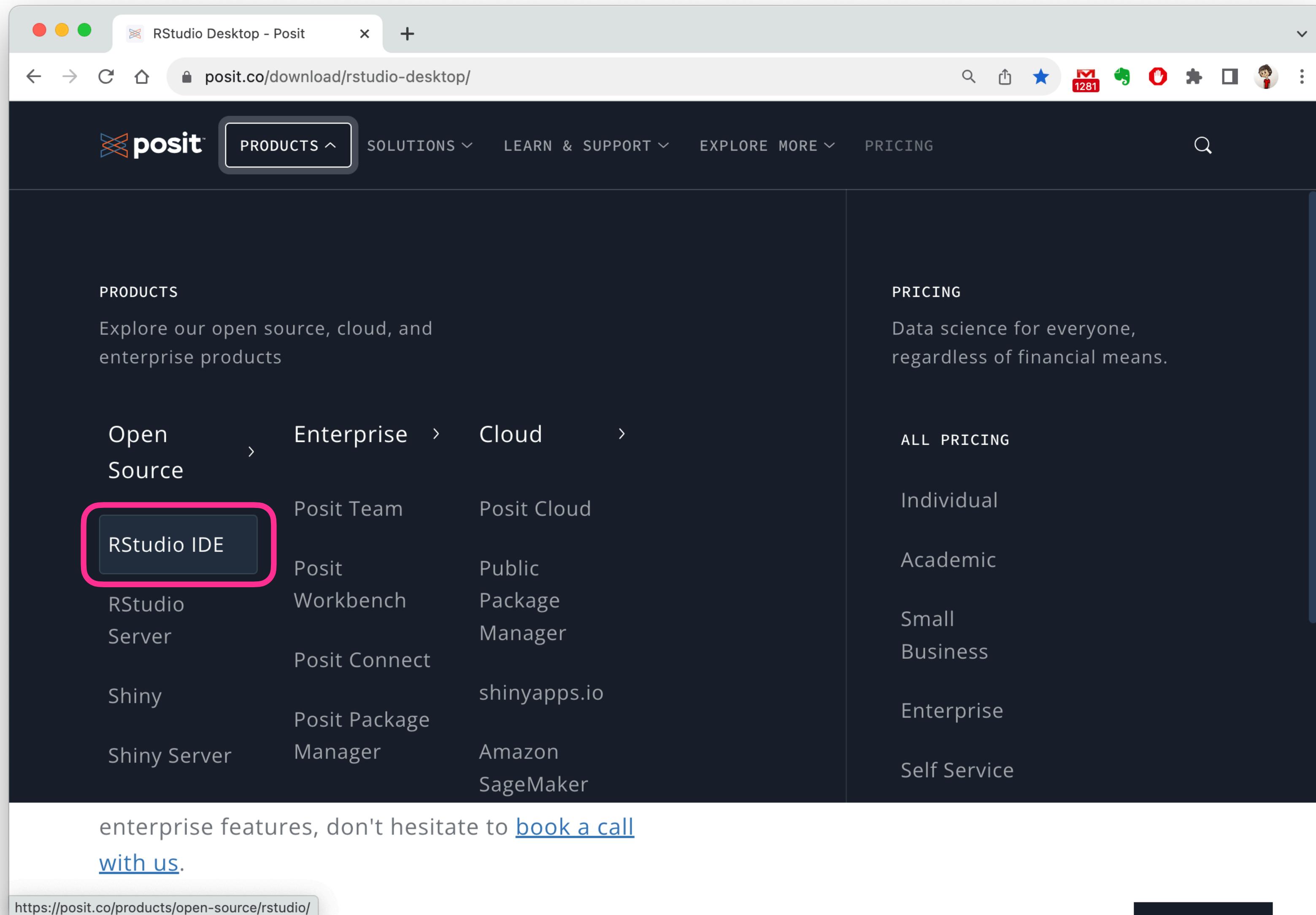
posit PRODUCTS SOLUTIONS LEARN & SUPPORT EXPLORE MORE PRICING

DOWNLOAD

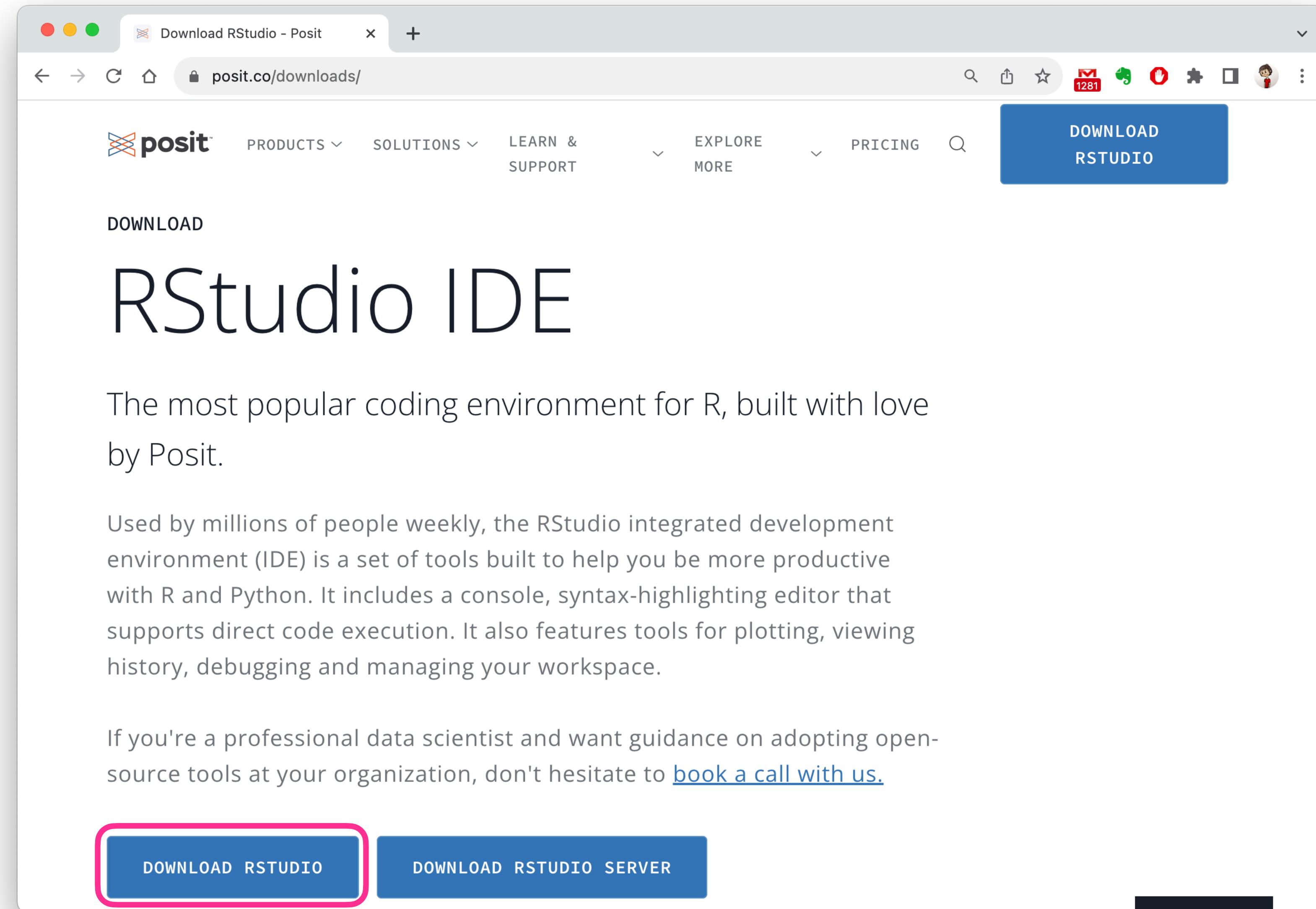
RStudio Desktop

Used by millions of people weekly, the RStudio integrated development environment (IDE) is a set of tools built to help you be more productive with R and Python.

Don't want to download or install anything? Get started with RStudio on [Posit Cloud for free](#). If you're a professional data scientist looking to download RStudio and also need common enterprise features, don't hesitate to [book a call with us](#).



En el menú Productos, elegimos RStudio IDE



Elegimos la versión de escritorio

1: Install R

RStudio requires R 3.3.0+. Choose a version of R that matches your computer's operating system.

DOWNLOAD AND INSTALL R

2: Install RStudio

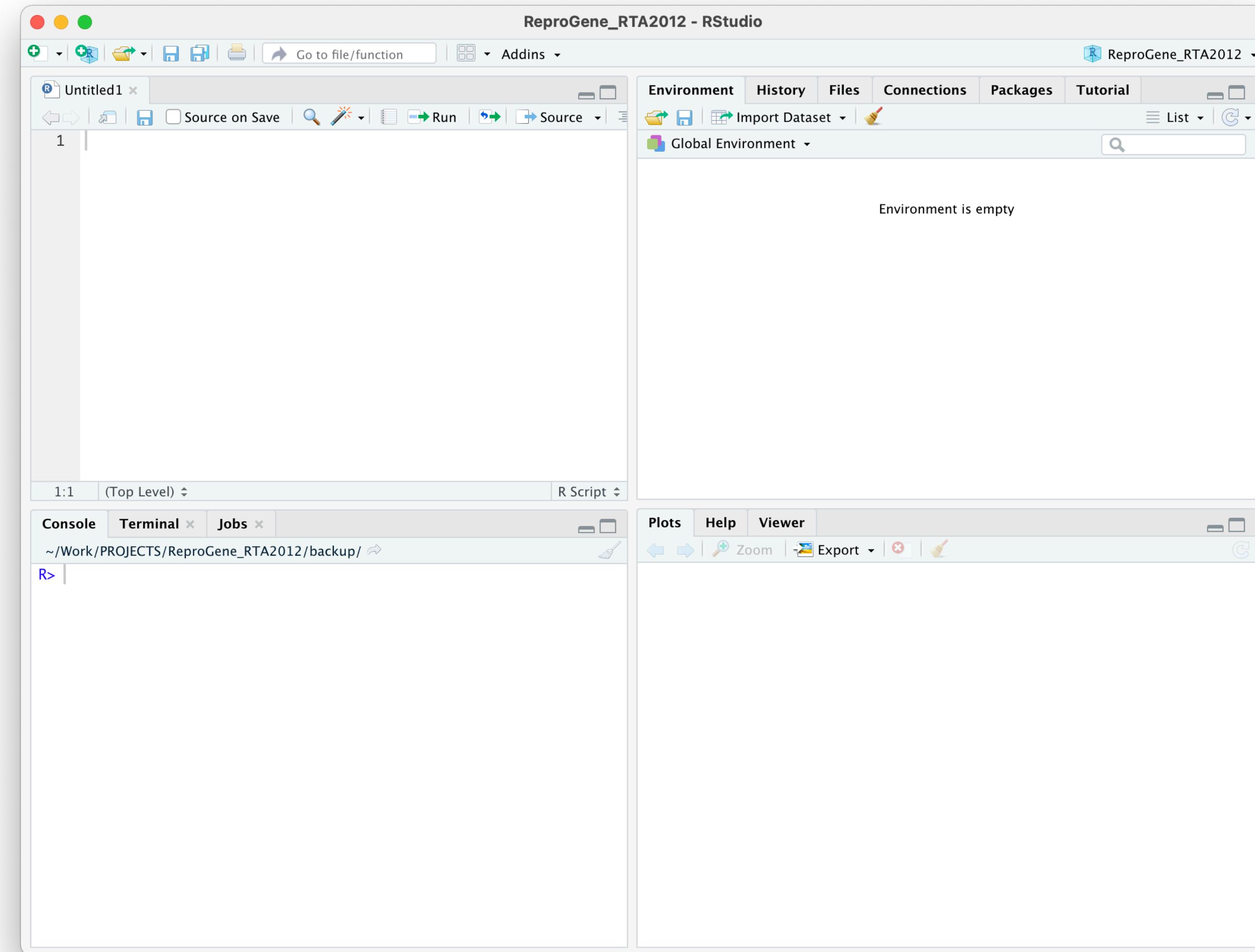
DOWNLOAD RSTUDIO DESKTOP FOR MACOS 11+

This version of RStudio is only supported on macOS 11 and higher. For earlier macOS environments, please [download a previous version](#).

Size: 385.88 MB | [SHA-256: 25A2CC51](#) | Version: 2023.09.1+494 | Released: 2023-10-17

All Installers and Tarballs

Elegimos la versión estándar (gratuita) correspondiente a nuestro SO



Esta es la interface gráfica de RStudio

Instalación de RStudio

4. Una vez instalado, podemos abrir RStudio y ejecutar R desde la IDE, además de editar scripts, explorar archivos, etc...
5. RStudio tiene muchas opciones de personalización
6. En clase veremos la IDE en detalle

Instalación de paquetes

1. Un paquete de R (package) es una colección de funciones y/o datos
2. Por defecto, R instala una serie de paquetes básicos. Ejecuta en la consola de R el comando `sessionInfo()`
3. Durante el curso vamos a usar una serie de paquetes adicionales. Para instalarlos:
 - a. Abre RStudio.
 - b. Abre el script llamado `intro2R_packages.R` dando el botón de la carpeta que hay en la esquina superior izquierda.
 - c. Una vez abierto, dale al botón “Source” que hay en la ventana del editor de scripts, arriba a la derecha.
 - d. Comenzará la instalación de los paquetes
4. Si prefieres, lo podemos hacer durante el curso

Complementos

1. Puede ser interesante instalar un editor de scripts (Visual Studio Code; Sublime Text, Textwrangler, Atom, etc)
2. Es interesante familiarizarse con el terminal (*cmd* en Windows; *shell* en Linux/OSX) para explorar archivos y hacer operaciones básicas de manera rápida y “sencilla”
3. En caso de trabajar de forma habitual con desarrollo de programas es conveniente usar un sistema de control de versiones (*VCS: versión control system*) como SVN o Git