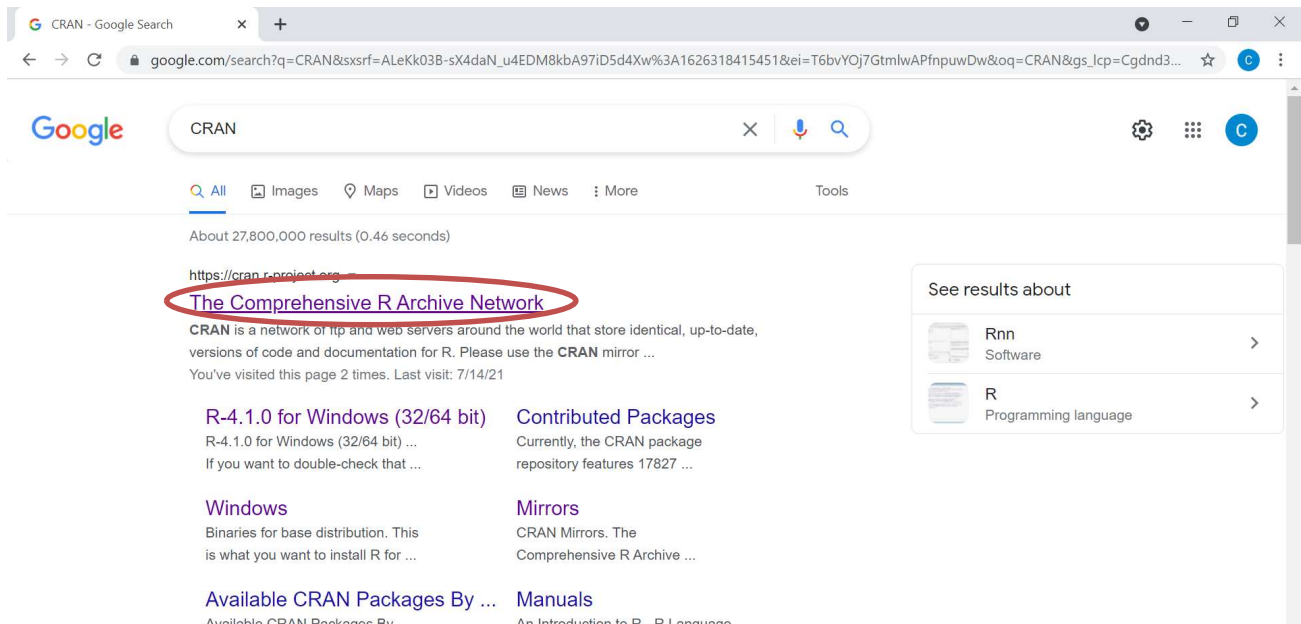


Installing R and RStudio

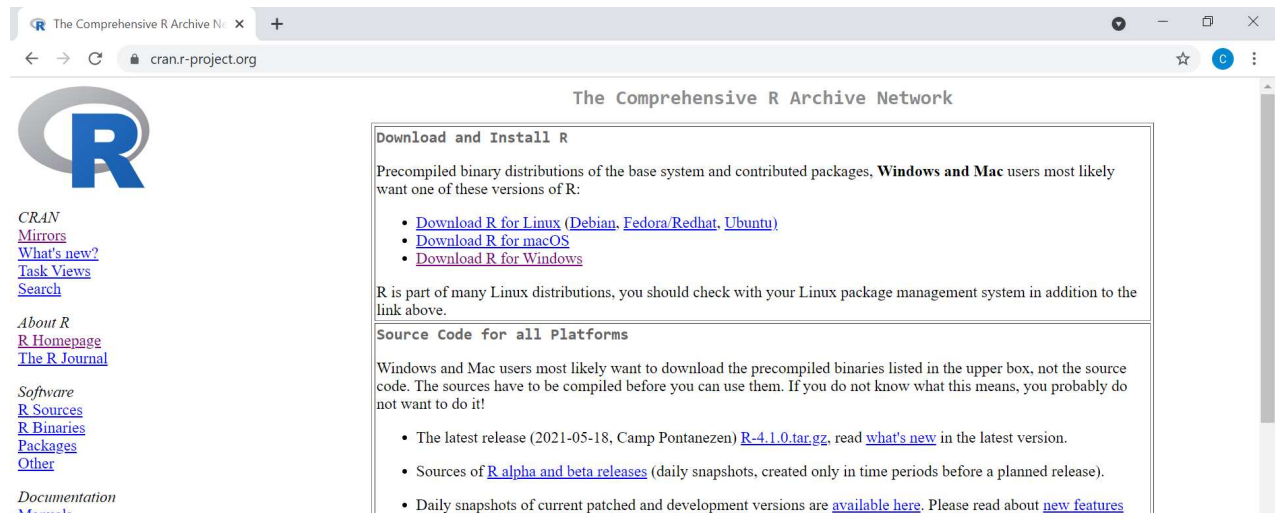
Installing R

RStudio is an interactive desktop environment, but it is not R, nor does it include R when you download and install it. Therefore, to use RStudio, we first need to install R.

1. You can download R from the Comprehensive R Archive Network (CRAN). Search for CRAN on your browser:

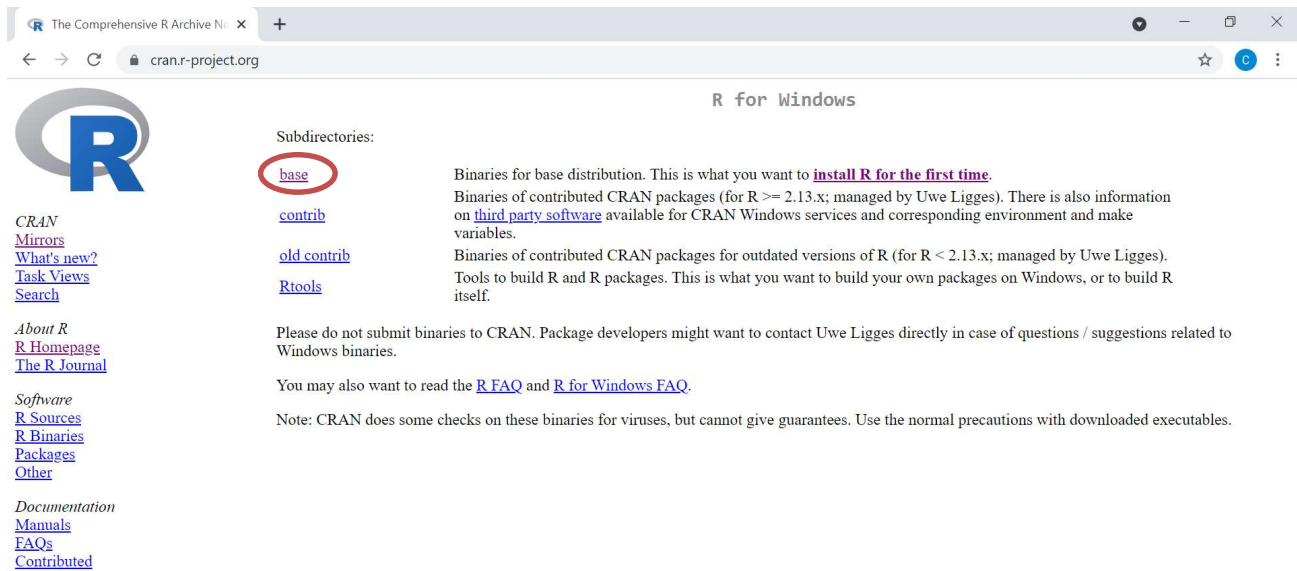


2. Once on the CRAN page, select the version for your operating system: Linux, Mac OS X, or Windows.



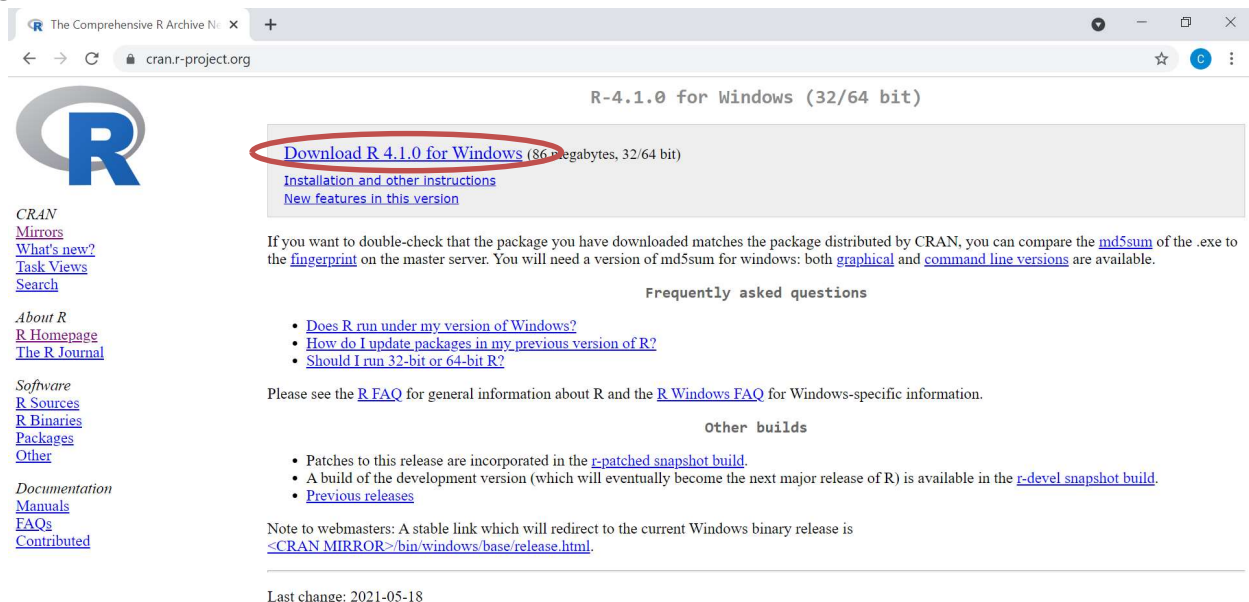
Here we show screenshots for Windows, but the process is similar for the other platforms.

3. Once at the CRAN download page, you will have several choices. You want to install the *base* subdirectory. This installs the basic packages you need to get started.



The screenshot shows the CRAN website for Windows. The browser address bar is 'cran.r-project.org'. The page title is 'R for Windows'. On the left, there is a sidebar with links: 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, Contributed. The main content area has a section 'Subdirectories:' with three links: 'base' (circled in red), 'contrib', and 'old contrib'. Below these links, there is text explaining the 'base' subdirectory: 'Binaries for base distribution. This is what you want to [install R for the first time](#). 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). 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 this, there is a note: '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.'

4. Click on the link for the latest version to start the download.



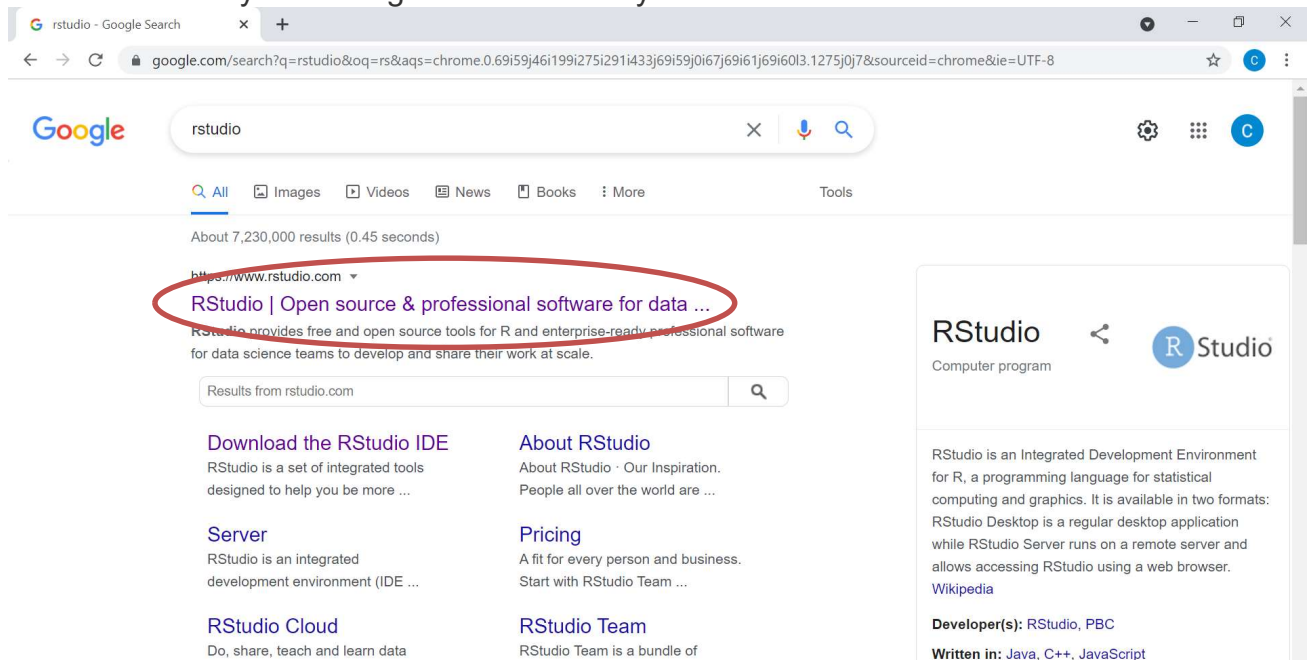
The screenshot shows the CRAN website for R-4.1.0 for Windows (32/64 bit). The browser address bar is 'cran.r-project.org'. The page title is 'R-4.1.0 for Windows (32/64 bit)'. On the left, there is a sidebar with links: CRAN, Mirrors, What's new?, Task Views, Search, About R, R Homepage, The R Journal, Software, R Sources, R Binaries, Packages, Other, Documentation, Manuals, FAQs, Contributed. The main content area has a section 'Download R 4.1.0 for Windows (86 megabytes, 32/64 bit)' (circled in red). Below this, there are links: 'Installation and other instructions' and 'New features in this version'. Below these links, there is text: '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.' Below this, there is a section 'Frequently asked questions' with three links: 'Does R run under my version of Windows?', 'How do I update packages in my previous version of R?', and 'Should I run 32-bit or 64-bit R?'. Below this, there is a note: 'Please see the [R FAQ](#) for general information about R and the [R Windows FAQ](#) for Windows-specific information.' Below this, there is a section 'Other builds' with two links: 'Patches to this release are incorporated in the [r-patched snapshot build](#).' and 'A build of the development version (which will eventually become the next major release of R) is available in the [r-devel snapshot build](#).' Below this, there is a note: 'Note to webmasters: A stable link which will redirect to the current Windows binary release is [<CRAN MIRROR>/bin/windows/base/release.html](#).' Below this, there is a footer: 'Last change: 2021-05-18'.

5. After the download is completed, click on the downloaded file to start the installation process.

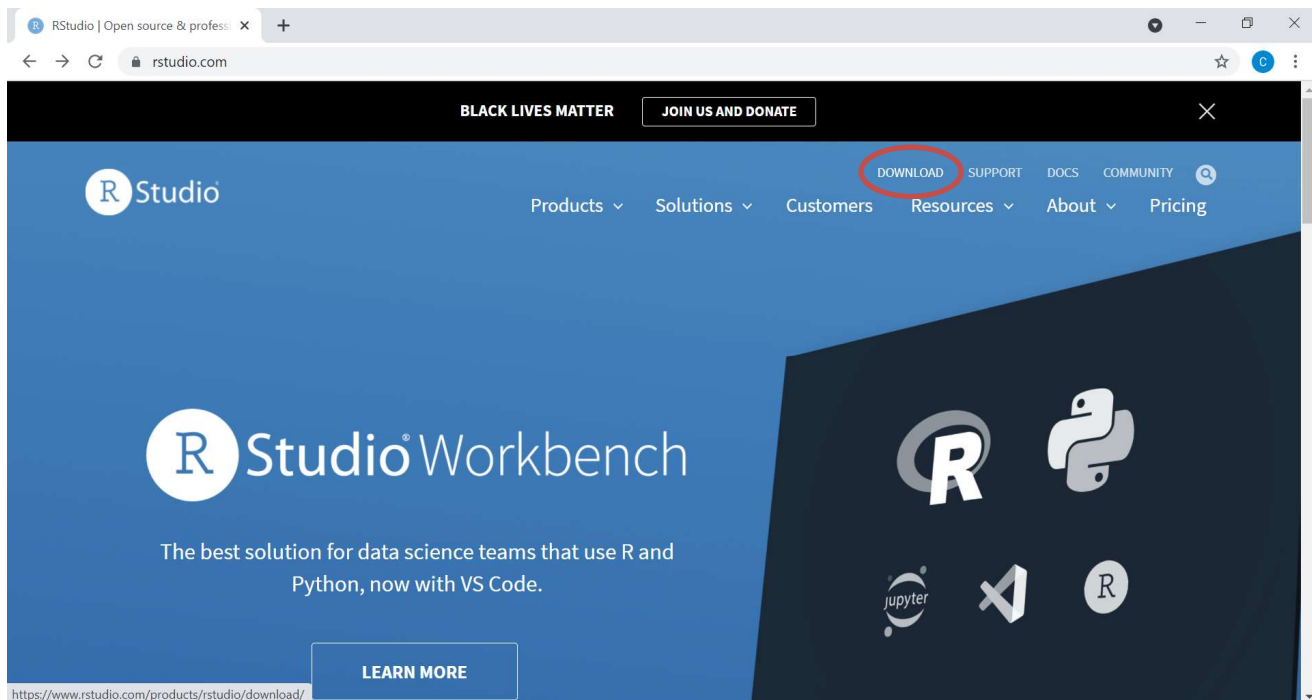
6. We recommend you select all the default choices to finish the installation.

Installing RStudio

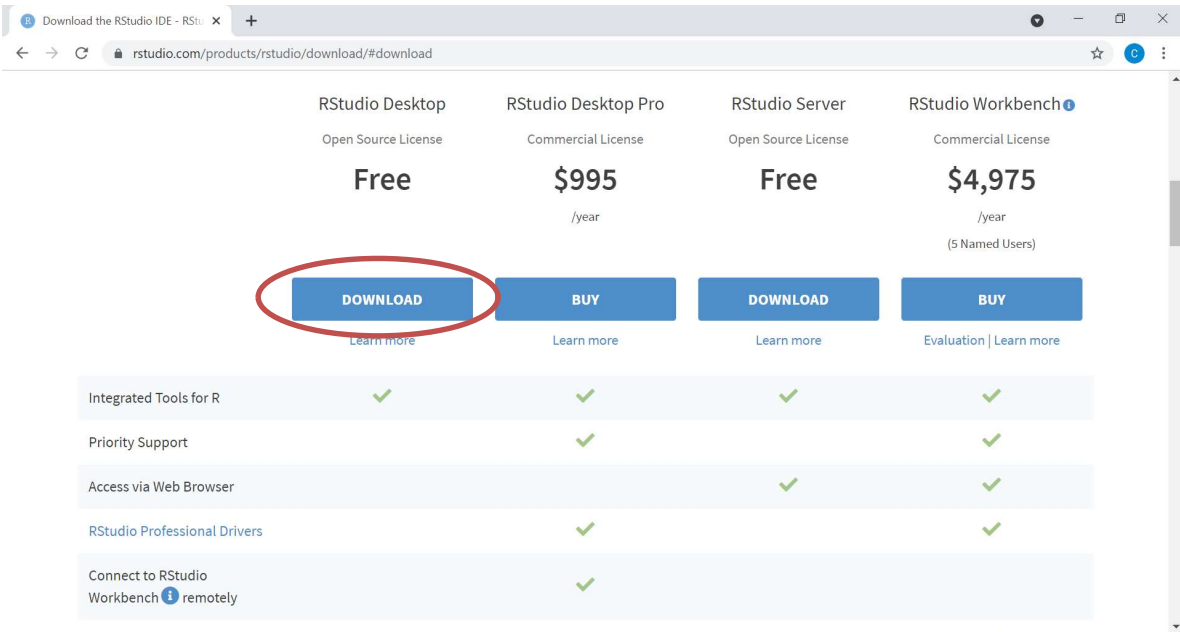
7. You can start by searching for RStudio on your browser:



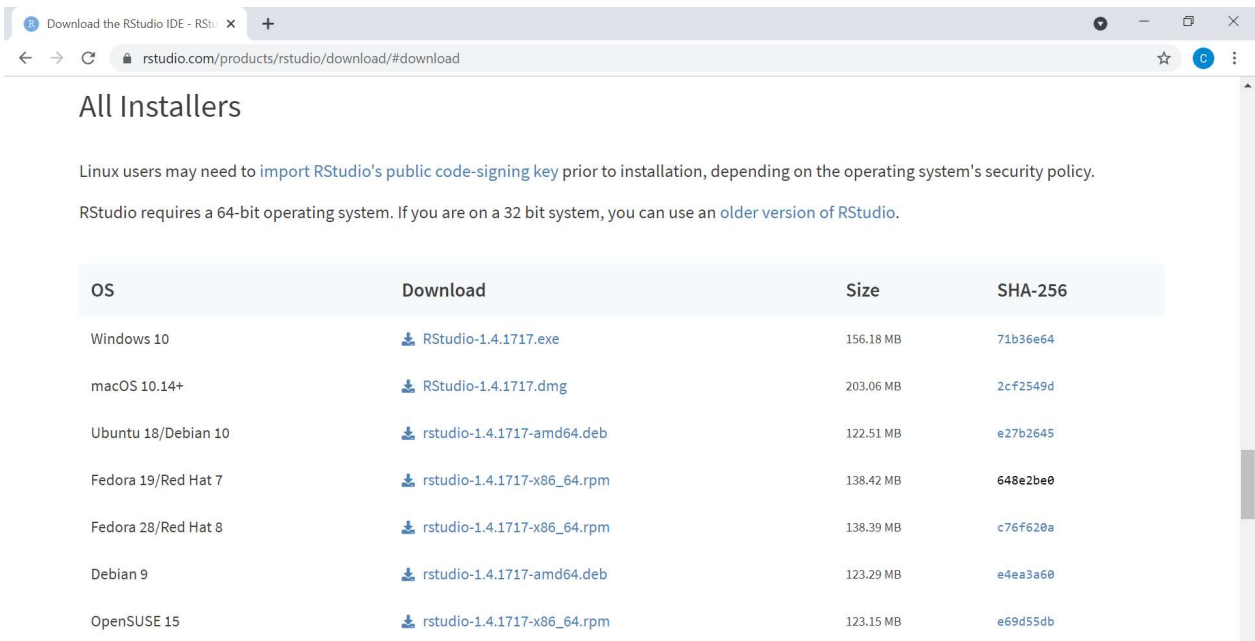
8. You should find the RStudio website as shown above. Once there, click on *Download*.



9. This will give you several options. For what we do in this course, it is more than enough to use the free Desktop version:



10. Once you select this option, it will take you to a page in which the operating system options are provided. Click the link showing your operating system.



11. After the download is completed, click on the downloaded file to start the installation process.

12. We recommend clicking yes on all the defaults to finish the installation.