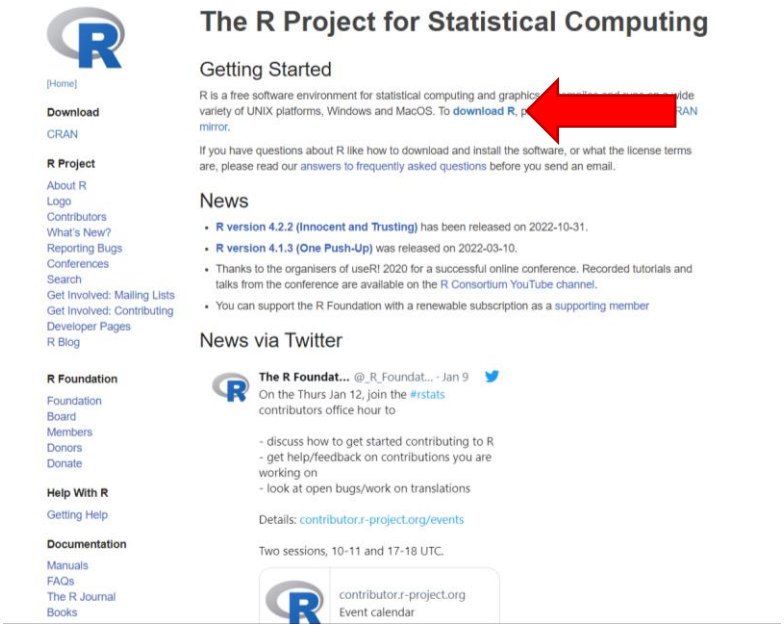
OVERVIEW

This short tutorial walks through how to install R and RStudio on your personal machine or laptop. The computers in our classroom have these software installed, as does the Virtual Workstations maintained by the A-School, but you will appreciate having direct access. R and RStudio are separate software applications and **you must** have both installed in order to complete the exercises in this course. The first thing to know, is that RStudio is an integrated development environment or IDE that makes it easier for us to interact with R, but you have to install both R and RStudio (i.e., RStudio alone is useless for our purposes).

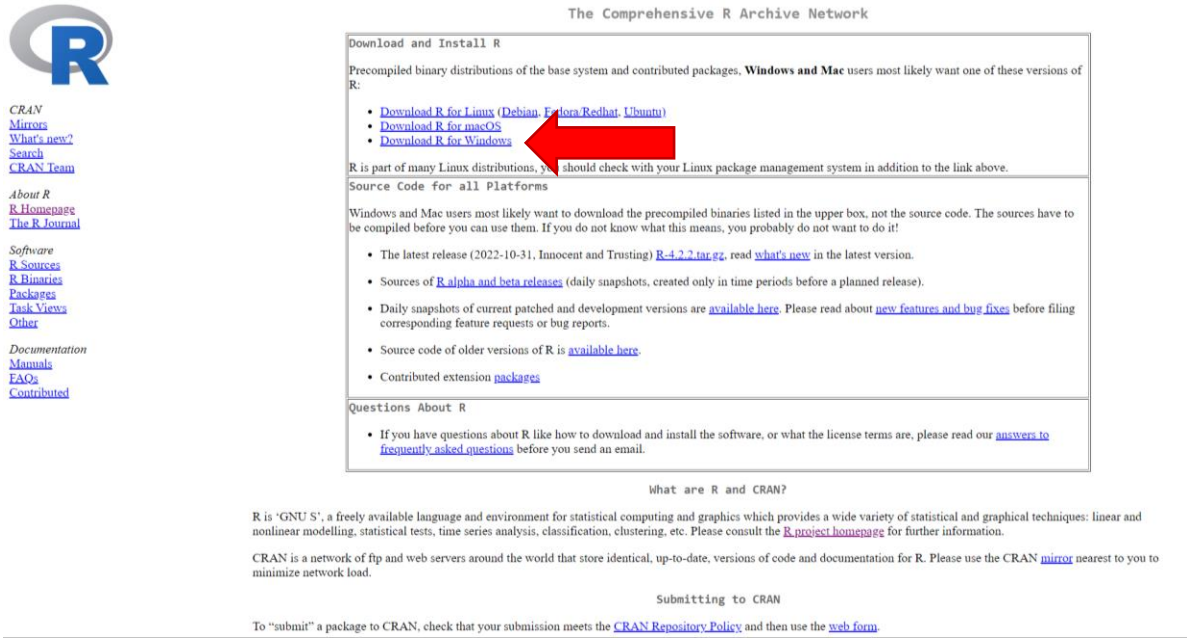
WINDOWS USERS

First we will install R. Open your preferred internet browser and visit https://www.r-project.org. Now, click the "download R" link near the middle of the page under "Getting Started."

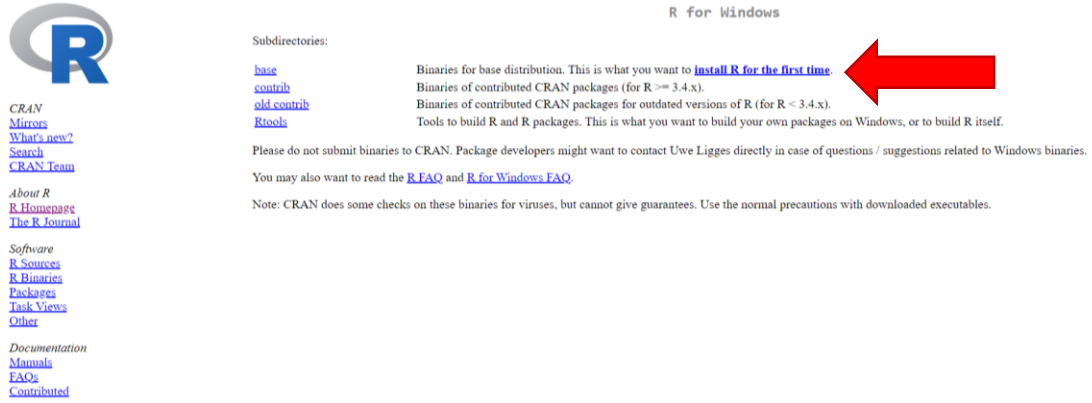


Next, select a CRAN location (a mirror site) and click the corresponding link. They are all the same, but the mirror site hosted at Duke University is physically closest to us.

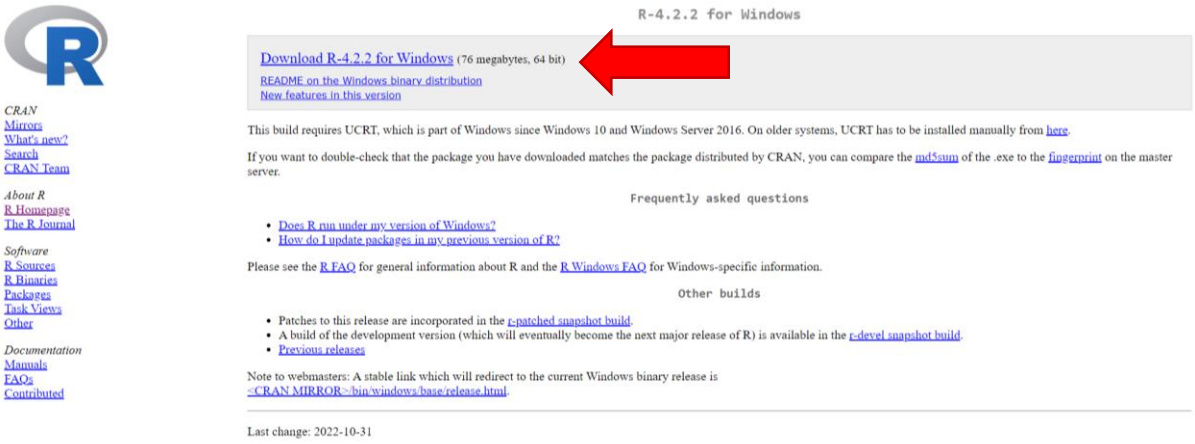
Click on the "Download R for Windows" link near the top of the page.



Now click on the "install R for the first time" link at the top of the page.

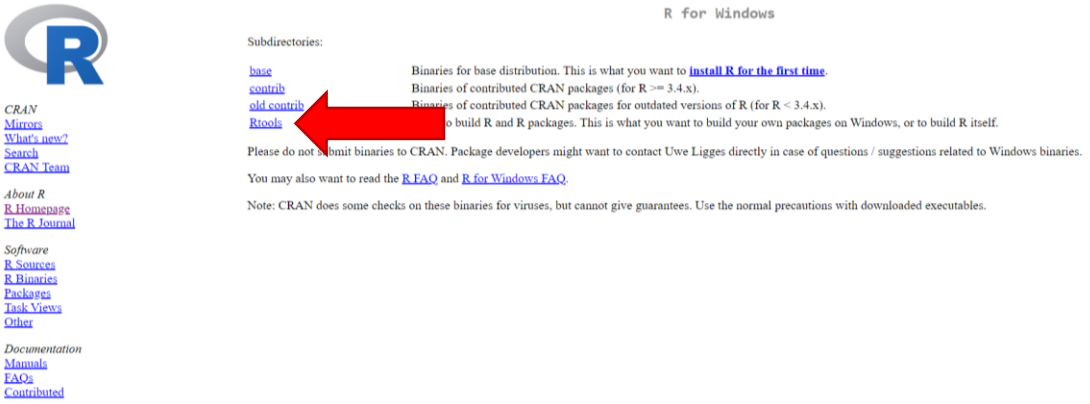


We're getting there! Next, click "Download R for Windows" and save the executable file somewhere on your computer.



Run the .exe file that you just downloaded and follow the installation instructions.

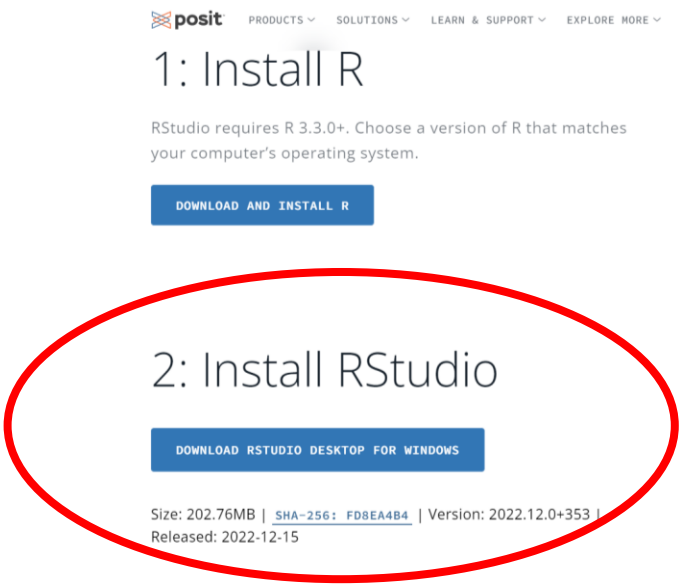
Next, you should go ahead and install RTools as well because it will save you some time later on in the course when we want to use packages that "live" on GitHub:



Click the installer link for RTools on the next page, then run the downloaded executable to install.

Now that R and RTools are installed on your system, you **still need to download and install RStudio**.

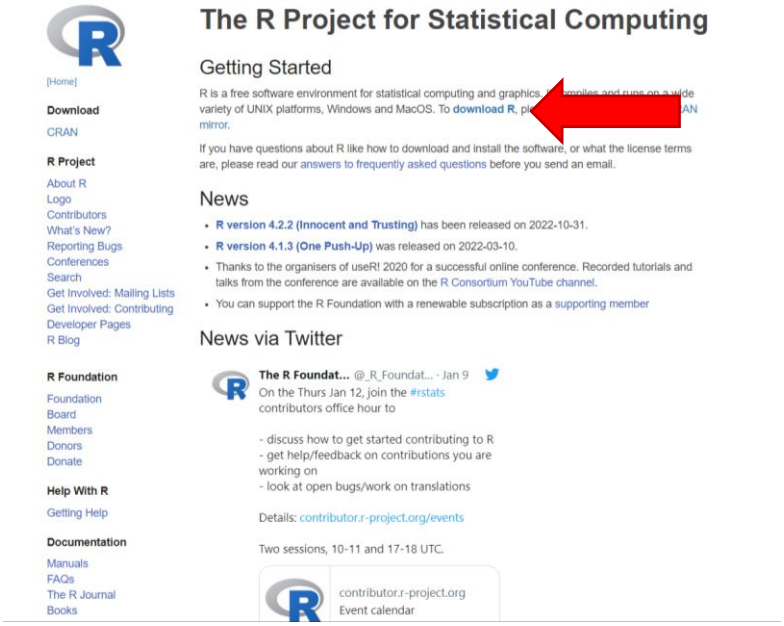
Open another web browser tab and navigate to https://posit.co/download/rstudio-desktop.
Click the "Install RStudio" button shown below.



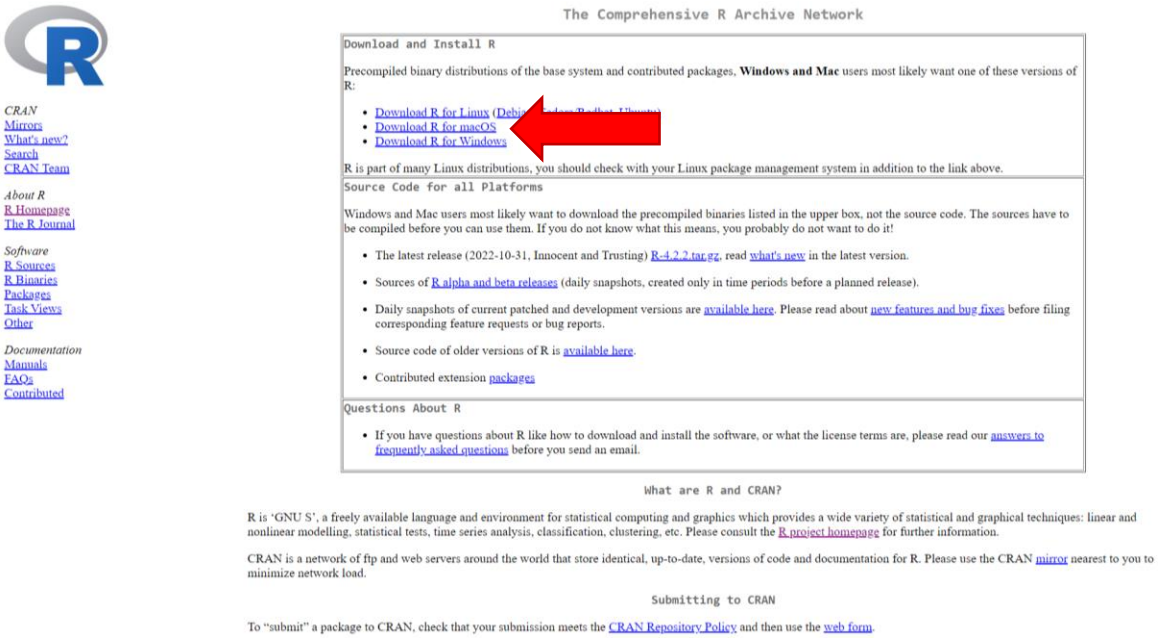
Unzip and run the .exe file you just downloaded and follow the installation instructions.

MAC USERS

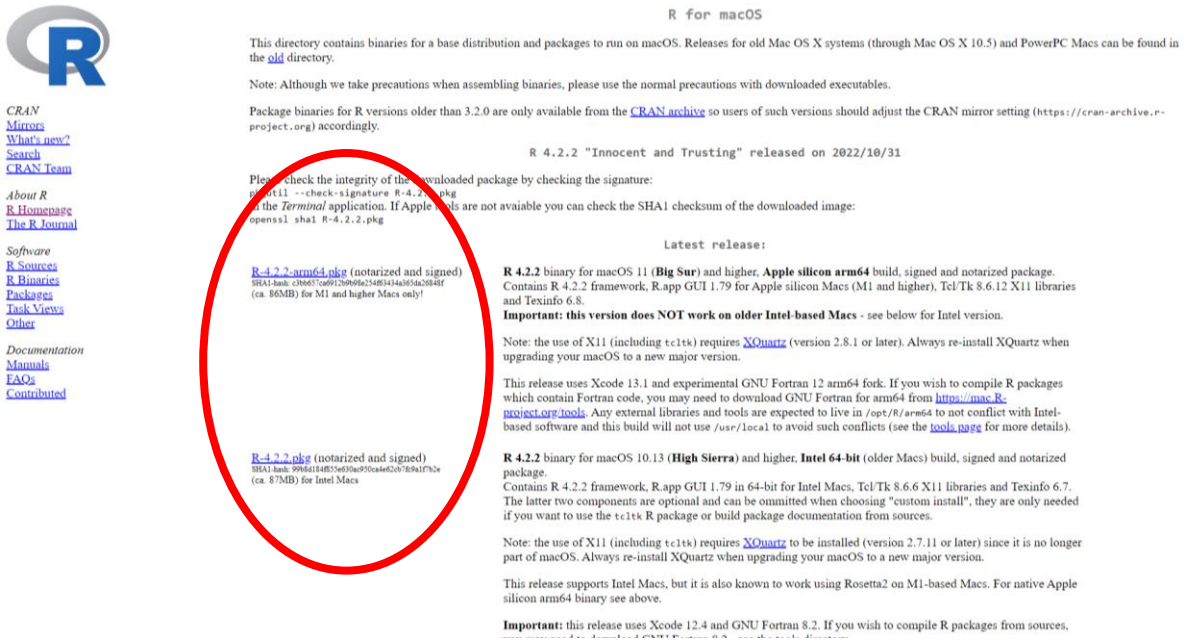
Again, the first step is to install R. Open your preferred internet browser and visit https://www.r-project.org. Now, click the "download R" link near the middle of the page under "Getting Started."



Next, select a CRAN location (a mirror site) and click the corresponding link. They are all the same, but the mirror site hosted at Duke University is physically closest to us. Click on the "Download R for macOS" link near the top of the page.



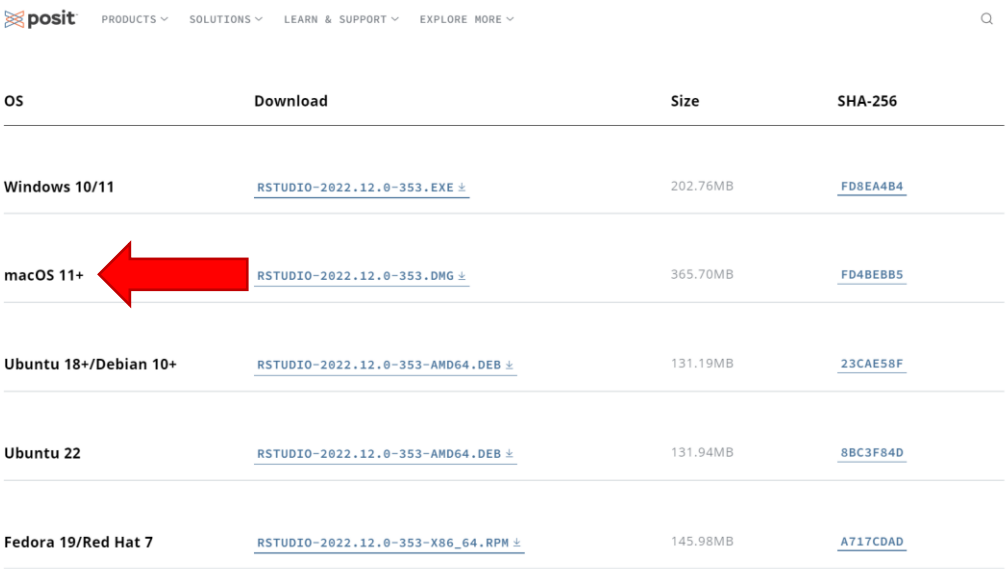
Click on the file containing the latest version of R **that is appropriate for your machine**.



Save the .pkg file, double-click it to open, and follow the installation instructions.

Now that R is installed on your system, you **still need to download and install RStudio**.

Open another web browser tab and navigate to https://posit.co/download/rstudio-desktop. The website should automatically detect your operating system, but if not just scroll down and click on the appropriate link:



Save the .dmg file on your computer, double-click it to open, and then drag and drop it to your applications folder.

Finally, RTools is only for Windows machines, but for Mac users you should only need to install Xcode Command Line Tools. To do this, open a terminal window, click Spotlight search in the top right of your screen, then search for "Terminal". Next copy and paste the following into the terminal and press Enter:

```
xcode-select --install
```

You will probably need to provide your password to enable installing the software. Follow any onscreen instructions and wait for it to finish. You can now compile R packages that do not yet exist on the CRAN mirror sites (e.g., newer packages that are hosted on GitHub).

EXTRA PRACTICE

If you have the time and inclination, take a look at this online tutorial after you have finished installing R and RStudio. Skip down to "Create an RStudio project" and open RStudio on your machine (note that this tutorial **assumes you are logging into a cloud-based instance of RStudio Server**, which we are not doing so NBD) to begin exploring R.

This would be a nice segue for the next class meeting.