

## Hands-on Lab: Download & Install R and RStudio

Estimated time needed: 15 minutes

Multiple programmers are moving towards data science, and in this process, R and RStudio play an essential role. So in this lab, you will understand how to install R and RStudio.

## **Objectives**

- Download and Install R
- · Download and Install RStudio

### Overview of R and RStudio

There are several cloud based data science tools that make team collaboration accessible. At times it is useful to work directly on your desktop.

R is a command-line interface; there are several graphical front-ends available. RStudio is an integrated development environment (IDE) for R. It includes the environmental tab, which shows the generated variables. In the history tab, you can see the commands used since starting, and there are other tabs such as files, plots, packages, help, and viewer. It has binaries available for major platforms, including Windows, Linux, and MacOS. This lab includes instructions for downloading and installing R and RStudio on Windows. Mac OS users can download the appropriate .pkg file from <a href="https://cran.r-project.org/bin/macosx/">https://cran.r-project.org/bin/macosx/</a> and follow the instructions.

#### **Exercise 1: Download & Install R on Windows**

Step 1: The latest version of R can be downloaded by clicking the link.

Windows: https://cran.r-project.org/bin/windows/base/



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Contributed

Download R-4.2.0 for Windows (79 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 Window

If you want to double-check that the package you have downloaded matches the pack server.

Freque

- Does R run under my version of Windows?
- How do I update packages in my previous version of R?

Please see the R FAQ for general information about R and the R Windows FAQ for V

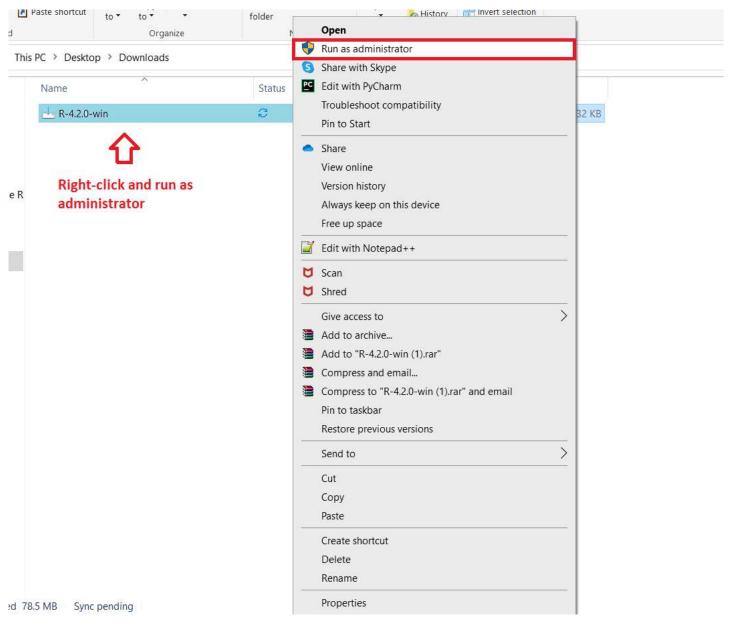
- Patches to this release are incorporated in the <u>r-patched snapshot build</u>.
- A build of the development version (which will eventually become the next ma
- · Previous releases

Note to webmasters: A stable link which will redirect to the current Windows binary <a href="mailto:</a> <a href="mailto:CRAN MIRROR">CRAN MIRROR</a> /bin/windows/base/release.html.

Last change: 2022-04-22

Step 2: Once the download completes, right-click the downloaded file, and click Run as administrator.

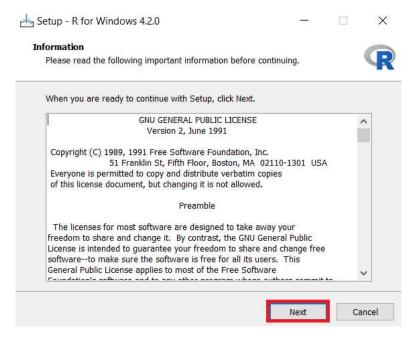
R-4.



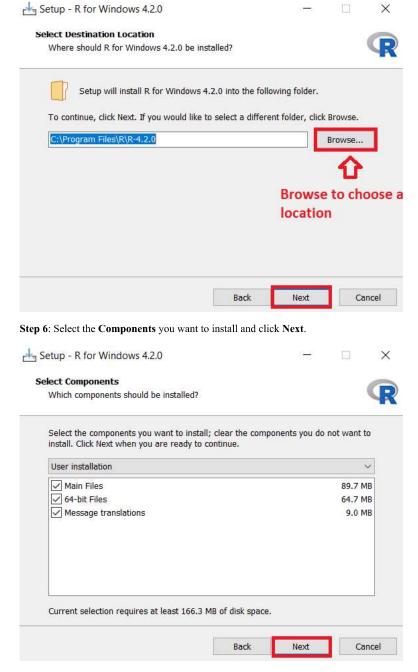
Step 3: Select your preferred installation language, and click OK.



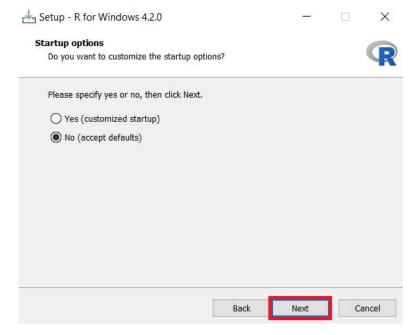
Step 4: Read and accept the license and click Next.



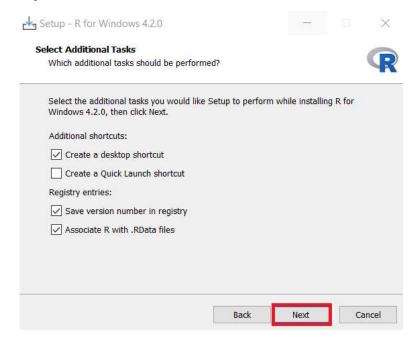
Step 5: Select the Folder where you would like to install R, or use the Default location, and click Next.



Step 7: In the Startup options, select the Default option and click Next.



Step 8: In the Select Additional Tasks window, retain Default and click Next.



Step 9: Once installation is successful, click Finish to close the setup.

## **Exercise 2: Download & Install RStudio**

 $\textbf{Step 1:} \ \textbf{Use the link below to download } \textbf{RStudio Desktop on your local machine.}$ 

Link for Download RStudio for windows and mac: <a href="https://posit.co/download/rstudio-desktop/">https://posit.co/download/rstudio-desktop/</a>

Step 2: Click Download RStudio desktop For Windows, and your download will start.

## 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.

## 1: Install R

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

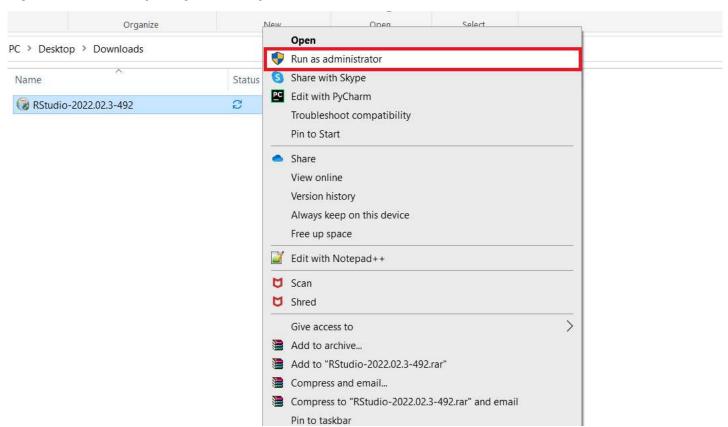
DOWNLOAD AND INSTALL R

## 2: Install RStud

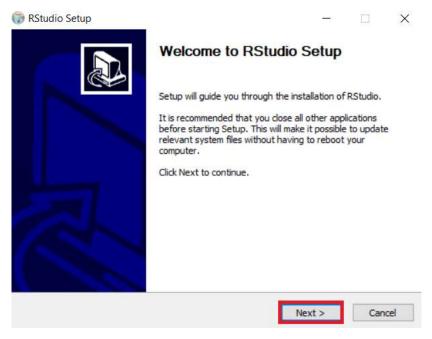
DOWNLOAD RSTUDIO DESKTOP FOR WINDOWS

Size: 202.77 MB | SHA-256: FD8EA4B4 | Ver 2022.12.0+353 | Released: 2022-12-15

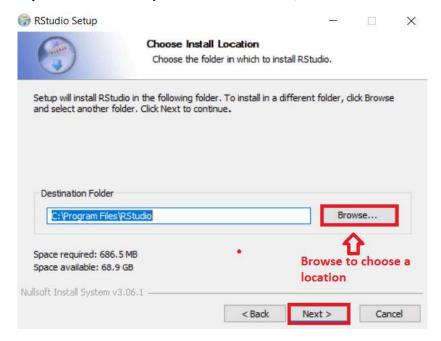
Step 3: Once the download completes, right-click the setup file, and click Run as administrator.



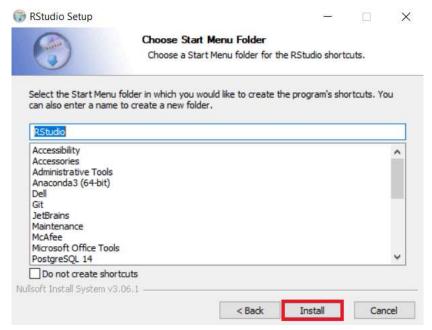
Step 4: In the RStudio setup window, click Next.



Step 5: Select the folder where you would like to install RStudio, or retain the **Default** installation location and click **Next**.

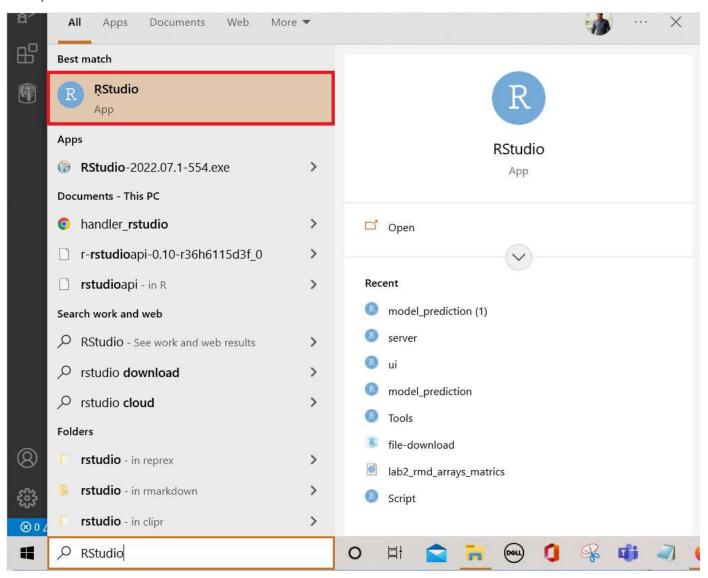


 $\label{thm:continuous} \textbf{Step 6} : In the \ Start \ menu \ window, \ click \ \textbf{Install} \ to \ install \ RStudio.$ 

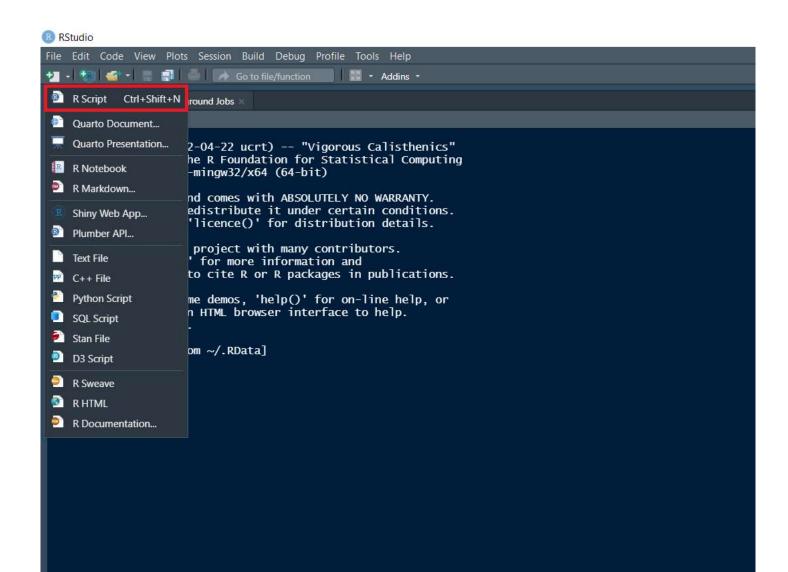


## **Exercise 3: Execute R code in RStudio**

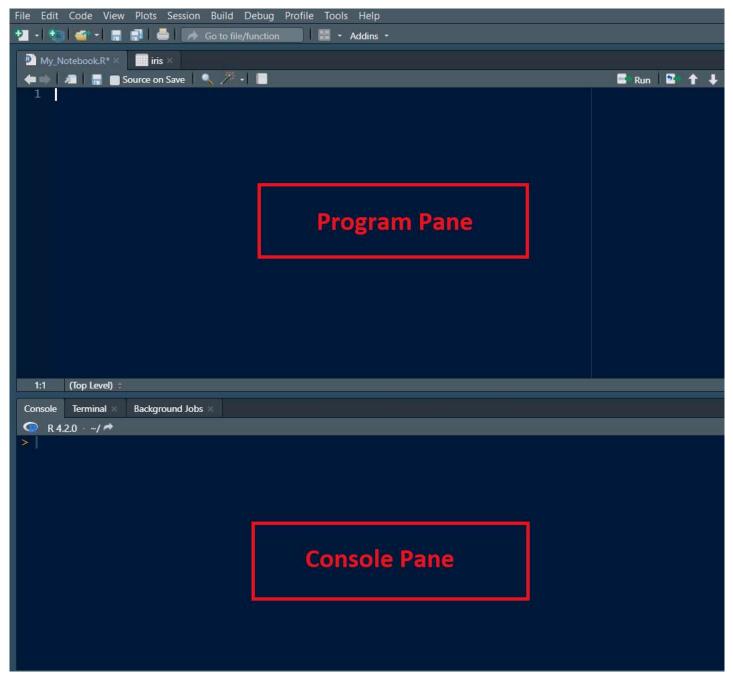
1. Open **RStudio** from the Windows start menu.



2. Click the  $plus\ symbol$  on the top left and select  $R\ Script.$ 



3. An untitled R Script panel opens. It would look as follows.

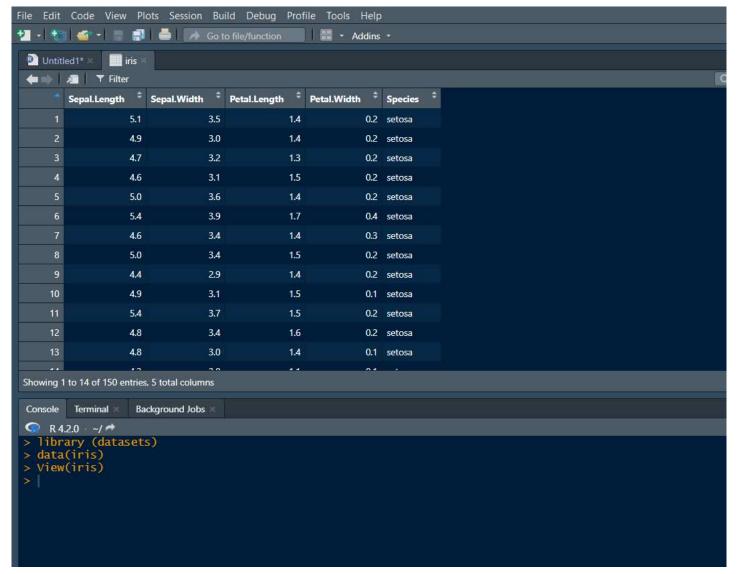


4. Now, load the **iris dataset**. Enter the following **lines** into the **Editor window** which appears. Next, select all of them. Then click the **Run icon** just above the Editor window.

library (datasets) data(iris) View(iris)

#### ► Output

5. You are taken directly to the data view tab to inspect your dataset. You can see five columns in this dataset, the first four are floating point, and the last one is the label of the data type string, which contains the category value of your data set. You can see that there are total of 150 entries.



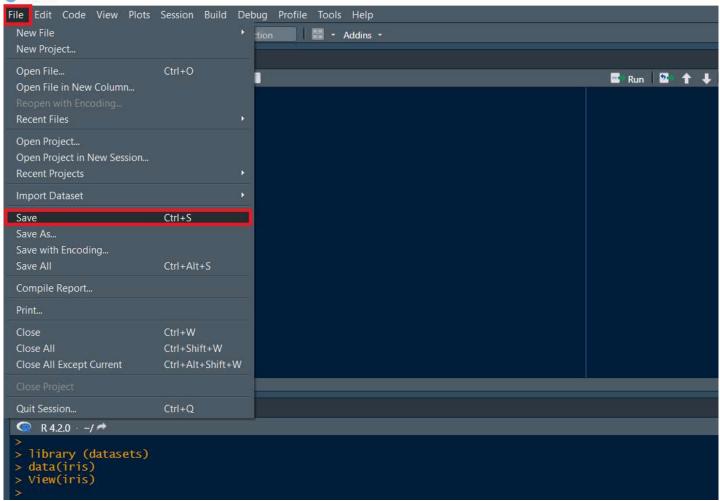
6. Now let's find how many **different species** are present in the data set. Type the following command in the **Editor window** and **click Run**. unique(iris\$Species)

▶ Output

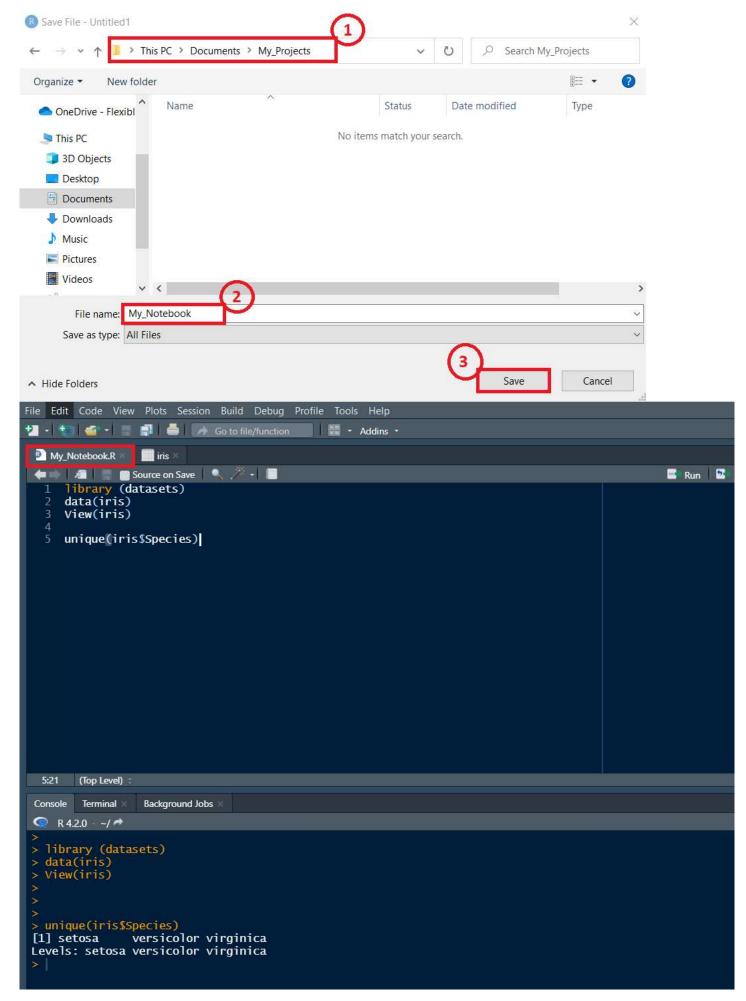
**Note**: In the Console window at the bottom, you will see the result of the executed command and know that only three different species are present in the dataset.

- 7. Save & provide a name to your Notebook.
- To save the notebook, click Save or Save as in the File menu.





• Select the working folder to rename your notebook to *My\_Notebook*.



Congratulations! In this document, you have learned how to download and install R and RStudio on your local machine. You also created a R notebook and saved it.

## Author(s)

# **Skills** Network