



University of Applied Sciences

HOCHSCHULE
EMDEN • LEER



How to install R and R Studio

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You should have a stable internet connection during the entire installation. Laptops (especially Macbooks) should be connected to the power supply. You will need to allow a little time for the installation, but the effort is only necessary once! Please follow these instructions.

If you have any problems during or with the installation, please contact me.

- R (<https://www.r-project.org/>) is the basic program.
- R Studio (<https://www.rstudio.com/>) is a comfortable development environment for R and offers additional tools, such as document creation etc.
- Additional packages (such as car, mosaic) offer further useful functionalities in addition to the functionalities of the basic installation.



Windows

You do not need administrator rights to install R and R Studio. You can install in your local directory or, for example, on a USB stick.

Linux

No special preparations necessary.

MacOS

Some additional packages such as `Rcmdr` require the X11 Windows system. This must be installed in advance - if not already present - from <http://www.xquartz.org/>. After installation, the computer must be restarted. Newer versions of R are only available for OS X from version 10.9 (Mavericks) or newer. It may therefore be worth updating for this reason too.

1. installation [XQuartz](<http://www.xquartz.org/>)
2. restart computer
3. continue with the installation of R and R Studio



First install R and then R-Studio.

Installing R

Install the latest version of R for your system from the page <https://www.r-project.org/>. It does not matter which “mirror” (server) you use, e.g. the Cloud Mirror of R Studio:

Windows: <https://cran.rstudio.com/bin/windows/base/>

macOS: <https://cran.rstudio.com/bin/macosx/>

You can generally use the default settings within the installation.

Installation of R-Studio (desktop)

You can install R-Studio (desktop version) from the page <https://www.rstudio.com/products/rstudio/download/> according to your operating system.

Tip: If you want to use files, code etc. across platforms, it is recommended that you go to `Tools... → Global Options → Code → Saving → Default text encodings:` `UTF-8`.

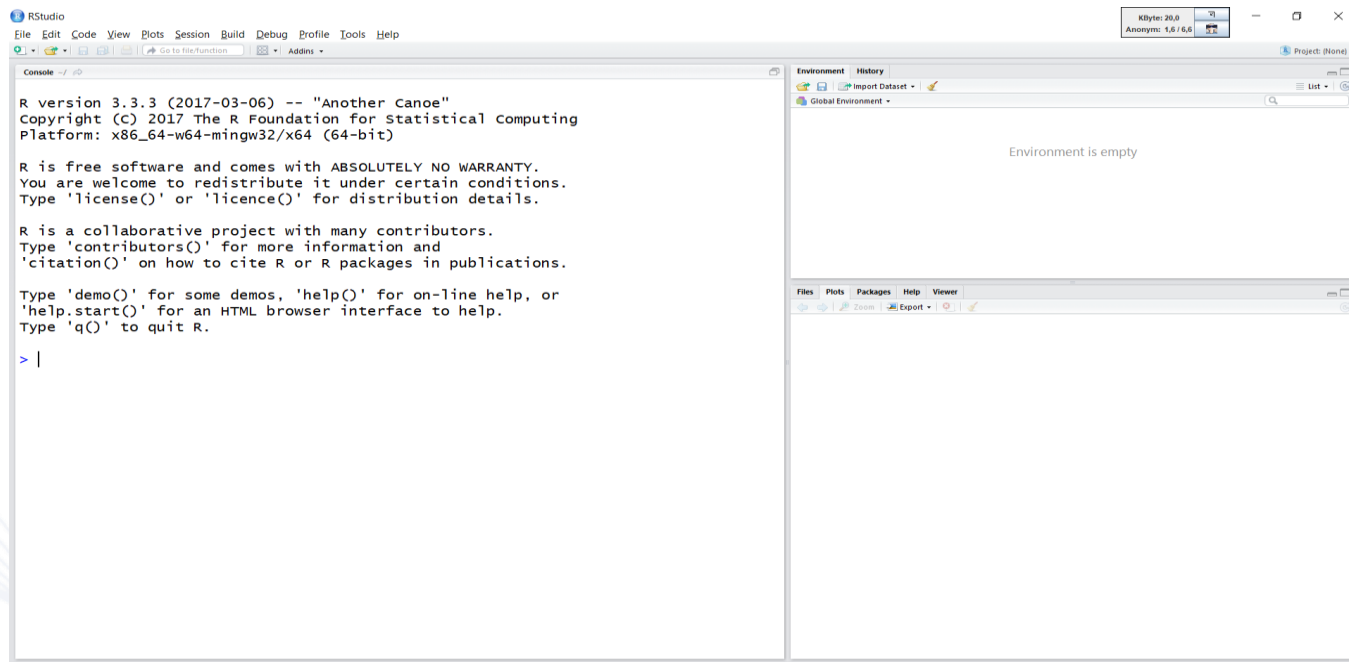
How to install R and R Studio

First start



The basic installation is now complete. R-Studio usually recognizes R automatically and you can start both by clicking on the program or the icon with the R-Studio logo. You will find the executable file in the `bin` folder of the directory in which you have installed R Studio. If you only want to start R, click on the icon with the R logo, but we will only work with R Studio.

You should see the following image on your screen:





Install an additional package

For the lecture, we will use the additional package “reshape2”, among others. Install this by entering the `install.packages()`-command:

```
install.packages(“reshape2”)
```

and pressing `Enter` or `Return`. You need a stable Internet connection for this. During the installation, dependent additional packages will be installed, so the process may take a while.

Further additional packages will be installed as required during the course of the lecture.

Activate an additional package

Additional packages only need to be installed once, but they have to be activated in each session when needed. To do this, use the `library()`-command:

```
library(reshape2)
```

Details on this will be provided in the lecture.

How to use the RStudio Cloud



If you have a stable internet connection, you can also use RStudio Cloud instead of installing it on your own computer.

With RStudio Cloud, you can access a cloud version of R and work in the same way as on a local R installation.

If you want to use the RStudio Cloud, please note the following information:

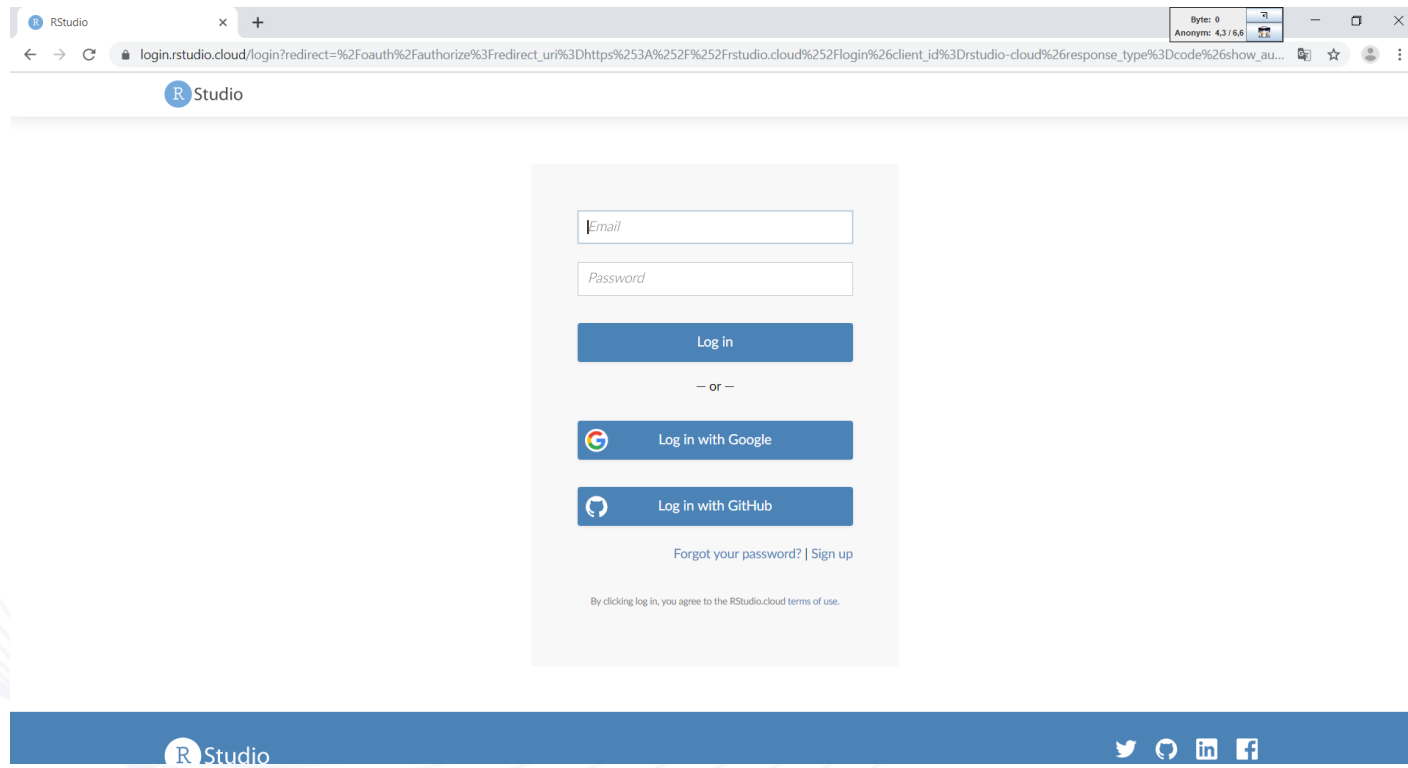
- RStudio Cloud is free for students. However, R Studio is planning to introduce fees, so free use cannot be guaranteed.
- A stable internet connection is required to use the RStudio Cloud.

How to use the RStudio Cloud Link and registration



Please use the following link: **<https://posit.cloud/content/1045758>**

A login screen will appear. If you do not yet have login data, you must create an account.



How to use the RStudio Cloud

After the login, the start screen appears



The screenshot displays the RStudio Cloud web interface. The browser address bar shows the URL `https://rstudio.cloud/project/1045758`. The interface includes a top navigation bar with tabs for 'Datei', 'Bearbeiten', 'Ansicht', 'Chronik', 'Lesezeichen', 'Extras', and 'Hilfe'. Below this is a workspace header for 'Your Workspace / Hochschule Emden Leer' by 'Joachim Schwarz'. The main area is divided into several panels:

- Left Panel:** Contains 'Spaces' (Your Workspace, New Space) and 'Learn' (Guide, What's New, Primers, Cheat Sheets).
- Top Panel:** Includes a menu (File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help) and a toolbar with icons for file operations and a 'Go to file/function' search bar.
- Console:** Displays the R version 3.6.3 startup message and instructions for using the interface.
- Environment:** Shows the 'Global Environment' and indicates that the environment is empty.
- Files:** A file explorer showing the project structure with files like 'Rhystory' and 'project.Rproj'.

How to use the RStudio Cloud

How to open a new script window



The screenshot displays the RStudio Cloud web interface. The top navigation bar includes tabs for 'Datei', 'Bearbeiten', 'Ansicht', 'Chronik', 'Lesezeichen', 'Extras', and 'Hilfe'. The browser address bar shows the URL 'https://rstudio.cloud/project/1045758'. The main workspace area is titled 'Your Workspace / Hochschule Emden Leer' and shows a list of files and folders. The 'File' menu is open, with 'New File' selected, and a sub-menu is visible showing options like 'R Script', 'R Notebook', 'R Markdown...', 'Quarto Doc...', 'Shiny Web App...', 'Plumber API...', 'C File', 'C++ File', 'Header File', 'Markdown File', 'HTML File', 'CSS File', 'JavaScript File', 'D3 Script', 'Python Script', 'Shell Script', 'SQL Script', 'Stan File', 'Text File', 'R Sweave', 'R HTML', 'R Presentation', and 'R Documentation...'. The 'Environment' pane on the right shows 'Global Environment' with the message 'Environment is empty'. The 'Files' pane at the bottom shows a list of files and folders, including '.Rhistory' and 'project.Rproj'.

How to use the RStudio Cloud

Now you are ready to start 😊



The screenshot displays the RStudio Cloud web interface. The top navigation bar includes tabs for 'Datei', 'Bearbeiten', 'Ansicht', 'Chronik', 'Lesezeichen', 'Extras', and 'Hilfe'. The browser address bar shows the URL 'https://rstudio.cloud/project/1045758'. The main workspace area is titled 'Your Workspace / Hochschule Emden Leer' and shows a file explorer with a folder named 'project'. The console window at the bottom displays the R version 3.6.3 startup message and the RStudio Cloud environment information. The file explorer on the right shows the contents of the 'project' folder, including a file named 'project.Rproj'.

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Run Source

Environment History Connections Tutorial

Global Environment

Environment is empty

Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

Cloud > project

Name	Size	Modified
..		
.Rhistory	0 B	Mar 17, 2020, 2:13 PM
project.Rproj	205 B	Feb 4, 2022, 2:53 PM

Console Terminal Jobs

R 3.6.3 . /cloud/project/

R version 3.6.3 (2020-02-29) -- "Holding the Windsock"
Copyright (C) 2020 The R Foundation for Statistical Computing
Platform: x86_64-pc-linux-gnu (64-bit)

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