

# On your device

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Prior starting, make sure to have admin rights on your device. While this is not a must-have it will make your life way easier.

## A. Basics

### 1. Install R

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

### 2. Install R Studio (R IDE)

<https://www.rstudio.com/products/rstudio/download/>

### 3. Data Manipulation

```
install.packages('tidyverse')
```

### 4. General ML package

```
install.packages('caret')
```

### 5. Others packages in support

```
install.packages(c('rmarkdown',  
                  'e1071',  
                  'mlbench',  
                  'ggthemes',  
                  'assertthat',  
                  'kernlab',  
                  'rpart',  
                  'rattle',  
                  'kknn',  
                  'randomForest',  
                  'nnet',  
                  'RSNNS',  
                  'metrics'))
```

## B. Neural Networks

### 1. 64-bit OS

Sorry, this is a must have.

### 2. Install the latest release of Python

<https://www.howtogeek.com/197947/how-to-install-python-on-windows/>

Do not forget to set the following **environment variables** on your device

- *PATH* must point to the directory of python.exe (e.g. C:\User\FolderWhereYouInstalledPython)

And, in case you are working on a corporate device:

- set *HTTP\_PROXY* to [http://YOUR\\_ID:YOUR\\_PWD@proxymil.internal.unicredit.eu:3128/](http://YOUR_ID:YOUR_PWD@proxymil.internal.unicredit.eu:3128/)
- and *HTTPS\_PROXY* to [https://YOUR\\_ID:YOUR\\_PWD@proxymil.internal.unicredit.eu:3128/](https://YOUR_ID:YOUR_PWD@proxymil.internal.unicredit.eu:3128/)

### 3. Interface R - Python

```
install.packages('reticulate')
```

### 4. Neural Nets

```
install.packages(c('tensorflow',  
                  'keras'))  
  
tensorflow::install_tensorflow()  
keras::install_keras() # this may throw an error but work anyway
```

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## C. Jupyter Notebooks

In case you want to run our amazing notebooks offline. (Requires Python installation)

### 1. Configure stuffs

```
install.packages(c('repr',  
                  'IRdisplay',  
                  'evaluate',  
                  'crayon',  
                  'pbdZMQ',  
                  'devtools',  
                  'uuid',  
                  'digest'))  
  
devtools::install_github('IRkernel/IRkernel')  
IRkernel::installspec(user = FALSE)
```

## 2. Install visual Studio Build Tools

<http://landinghub.visualstudio.com/visual-cpp-build-tools>

## 3. From the CMD line (opened as administrator)

If you wish to use jupyter notebooks

```
pip install jupyter
```

If you prefer jupyterlab instead

```
pip install jupyterlab
```

Be sure to be in the right hard drive

```
C:
```

Start jupyter/jupyterlab (a browser window should magically pop up). From there, you can source the .ipynb in the folder where you have downloaded it

```
jupyter-notebook
```

```
jupyter-lab
```

To connection (once you are done), hit CTRL+C twice in the CMD line

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## D. Cloud

In case you do not manage to execute **A.** and **B.** you can run everything from <https://rstudio.cloud>