On your device

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.python.org/ftp/python/3.6.5/python-3.6.5-amd64.exe (Windows)
- https://www.python.org/ftp/python/3.6.5/python-3.6.5-macosx10.9.pkg (Mac OS X 10.9 and later)

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/
- and *HTTPS_PROXY* to 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
```

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)
```

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

- *PATH* must point to the directory of R.exe (e.g. C:\Program Files\R\R-3.5.0\bin)

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