
Setup

The Data Visualization course will give you the opportunity to create data visualizations using Python. The package and environment management system *conda* will be used to manage and install required packages and it is recommended to use *Jupyter Lab* for the exercises.

Here you'll find a brief summary or links to detailed instructions how to install and setup *conda* and *Jupyter Lab*.

In case that you are already familiar with *conda* and *Jupyter Lab* you can skip the following safely. Just make sure that you have all necessary packages. It may be beneficial to generate a clean environment for this class with only the packages needed for this course.

Conda

From the *conda* website: "*Conda* is an open source package management system and environment management system that runs on Windows, macOS and Linux. *Conda* quickly installs, runs and updates packages and their dependencies." Open your browser and goto:

- <https://docs.conda.io/en/latest/index.html>
- click on "Miniconda" on the left side
- download the Python installer for your operating system
- open the installer and follow the instructions

After installation you can quickly check if *conda* was installed successfully. Open a terminal on MacOS/Linux. For Windows you should use the command line shipped with *conda*. Open Menu->Applications->Anaconda->Open Anaconda prompt. In the terminal/prompt type in:

```
$conda info
```

You should see general *conda* information (e.g. which version of *conda* is installed) in your terminal.

Environment Setup

Next, we generate a new environment and install the necessary packages for this course. The following block lists a couple of commands to install the necessary packages. Always follow the instructions on screen after using these commands. Open a terminal on MacOS/Linux or for Windows via Menu->Applications->Anaconda->Open Anaconda prompt.

```
$conda create --name datavis #creates a new empty environment
$conda activate datavis #switch to the newly created environment
$conda install pandas #packages are installed into the currently active environment
$conda install matplotlib
$conda install jupyterlab
```

You should be all set once all packages have been installed successfully. As a test, you can navigate with your terminal to a directory of your choice. Maybe you want to create a new folder for the Data Visualization class. You can do this in your terminal via

```
$mkdir foldername  
$cd foldername
```

To test if everything works as expected start *Jupyter Lab* from the terminal:

```
$jupyter lab
```

Jupyter Lab should start and opens automatically your browser. Simply click the button with the Python logo to generate a new empty Python notebook. Test if some of your installed packages can be imported in the Python notebook. Try for instance:

```
import pandas as pd
```