

# Machine Learning and Data Mining: Lab 01



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## Setup of the system environment for the labs

This lab is for installing and setting up your machine for the labs in the course Machine Learning and Data Mining.

We are going to implement all of the labs with Python in so-called jupyter notebook files using jupyter labs.

If you already have installed the necessary tools and libraries for running Python code in jupyter notebook files, you can just try out the corresponding **Lab01.ipynb** file and check if it is running on your machine.

For now, you need to install Python, pip und Jupyter-Labs on your (virtual) machine:

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### 1. Python (version $\geq 3.8$ )

Go to <https://www.python.org/downloads/> and install the latest (stable) version

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### 2. Pip

Pip (<https://pypi.org/project/pip/>) is the package installer for Python and should be installed automatically during the installation of Python

**Open the terminal and run the following command to check if pip works:**

```
pip --version
```

**it works if the pip version (something like “pip 21.0.1 ...”) is shown.** If it doesn't work, see <https://pip.pypa.io/en/stable/installation/>

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### 3. Jupyter Labs (<https://jupyter.org/>)

**To install Jupyter Labs, open the terminal and run:**

```
pip install jupyterlab
```

**Once installed, launch Jupyter Lab with:**

```
jupyter-lab
```

**After launching, navigate to the file “Lab01.ipynb” and run the cells using [Shift] + [Enter]. Try to complete the exercises (a)-(d).**

At the end of this lab all of the methods in the notebook file should be finish with the answer "Done...". Then you are all set. In the following labs, we are going to install more and more libraries with the pip command. These libraries are always mentioned in the header of the notebook files. So, it is **very important** that the installation of libraries is working for you.

If you have any questions, please ask the lecturer asap.