

Machine Learning: First Lab

Fabio Vandin

October 18th, 2022

Lab 1: Main Info

WHEN: Tuesday October 18th, 12:30-2:30pm

WHERE:

- rooms Te and Ue (**Ing. Antonio Collesei**)
 - 40 machines each
 - If you want to use machine in the lab: you need a DEI account (not Single Sign On), you can use the following link to get one: <http://www.dei.unipd.it/account>
- room Ke (**Ing. Dario Simionato**): use your own machine

I'll be in room Te or Ue and stream (Zoom) to the other ones

Will use Jupyter lab + Python (only need Anaconda)!

Main Info (2)

BEFORE THE LAB:

- Did you do the tutorial? Required before the lab
- You can bring your own machine IFF you have installed Anaconda
- Run (and understand!) the Jupyter notebook “*Python Basic Info*” (available on elearning)

WHAT WILL WE DO?

- See the background (on slides) and go through a Jupyter notebook (structure similar to what you may get for HWs)
- Some parts: will do together
- Other parts: you will have some time to do them, then either:
 - Together
 - At home + solution posted online later on

Log-in

- **Use Linux!** (Anaconda or Jupyter in Windows: may not be available...)
- **after logging in in Linux**, open a terminal and **run** the following commands:
 - `source /nfsd/opt/anaconda38/anaconda.sh`
 - `conda activate`

Without running such command, the Jupyter lab may not be accessible.

Using a Jupyter notebook

- Download files from elearning course's website
- In terminal, in the folder where with the files for the lab, to start jupyter lab run

`jupyter-lab`

otherwise, to run a jupyter-notebook run:

`jupyter-notebook notebookName`

- The first time you run Python code in a Jupyter notebook in the department, you may get a warning (something that looks like: "UserWarning: Matplotlib is building the font cache using fc-list. This may take a moment.") Do not panic, and just wait for system to finish.

Data

Classification problem:

- Wine data

<http://archive.ics.uci.edu/ml/datasets/wine>

See links above for descriptions and references