APAI Lab1: DNN Definition and Training

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In this Hands-on session:

A first-time user of Pytorch framework will learn how to :

- define a Neural Network in PyTorch;
- train a NN;
- test a NN.

Tasks:

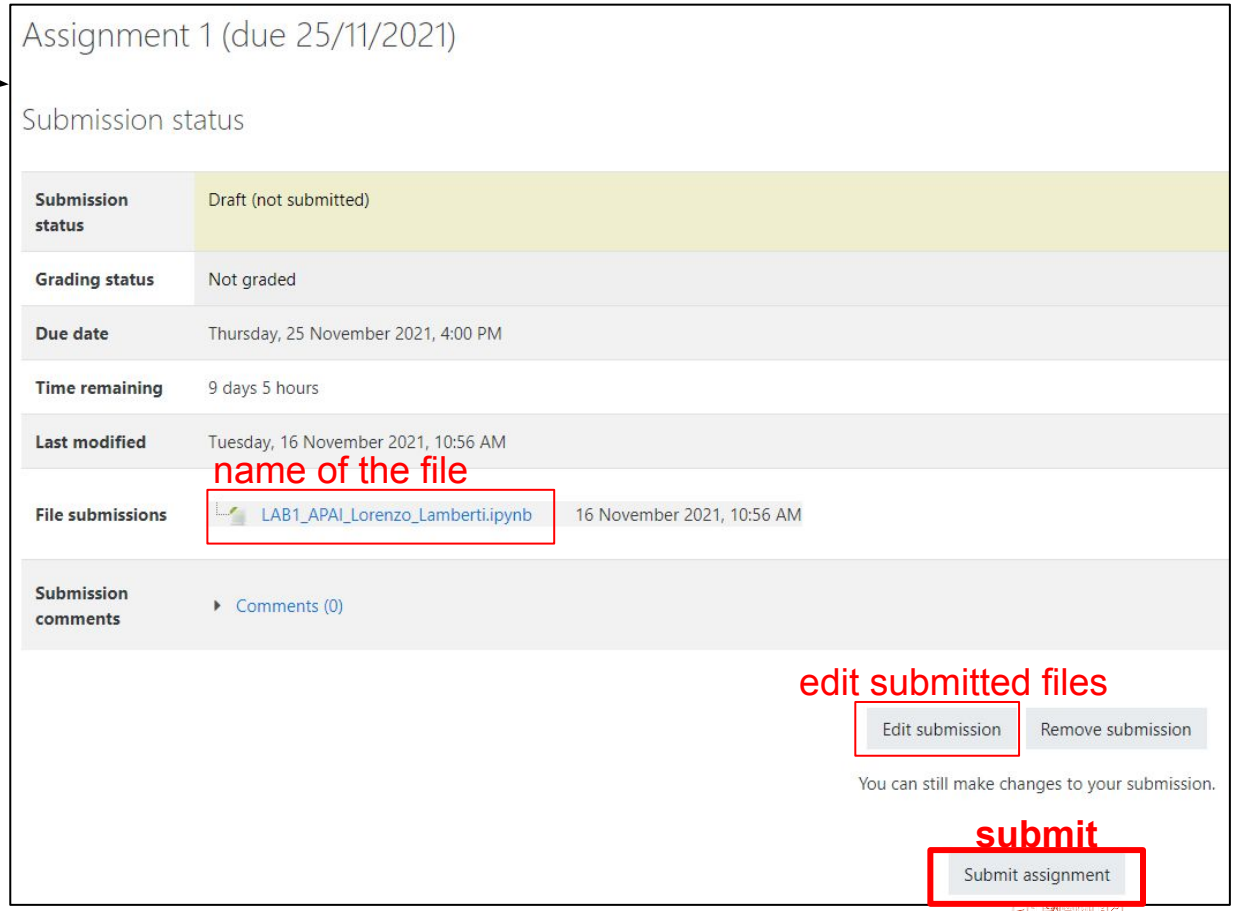
1. PyTorch definition of a NN model;
2. Count network's parameters and MAC operations;
3. Data loader for Fashion-MNIST
4. Code for testing a neural network on Fashion MNIST dataset;
5. Code for training a neural network on Fashion MNIST;
6. Save and load model's trained weights;

All the details about the tasks are explained in the pdf document attached.

How to deliver the assignment

- Use Virtuale platform to load your file
- update only the .ipynb file, **named as follows**:

  LAB1_APAI_yourname.ipynb

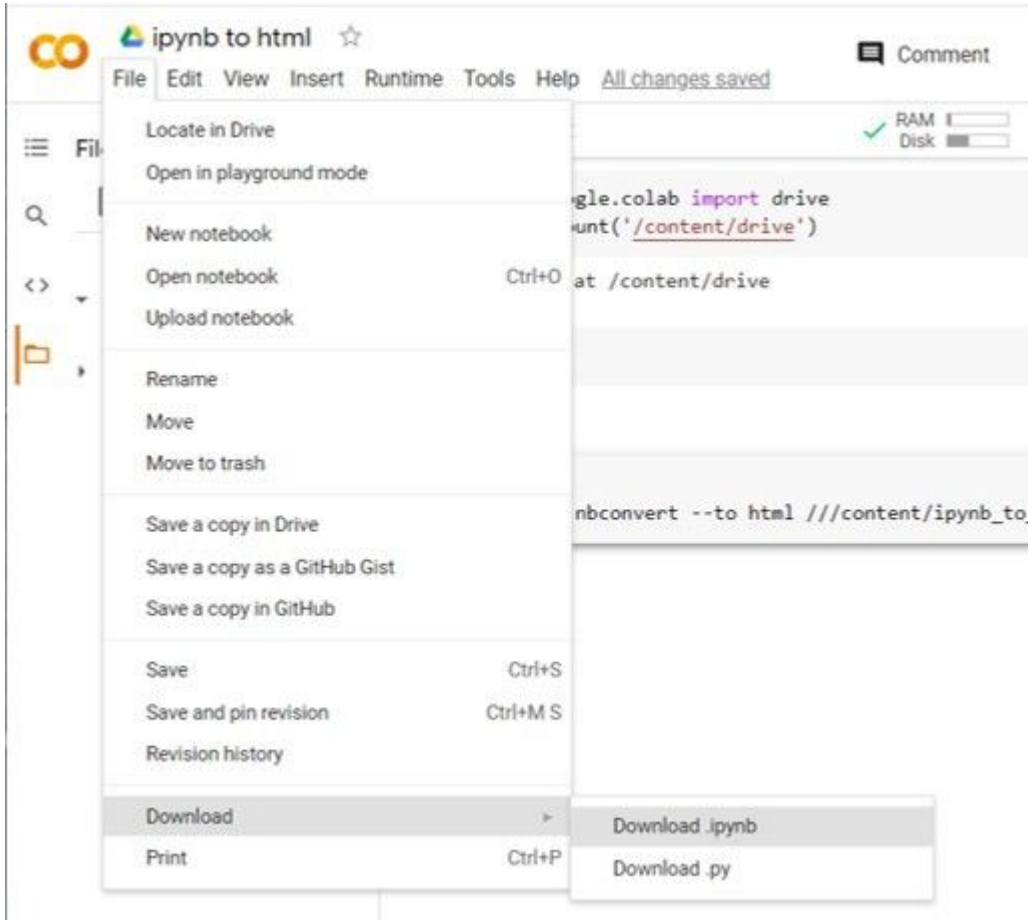


Important: the notebook must be pre-run by you. Outputs must be correct and visible when you download it.

LAB1 DEADLINE:

5/10/2023

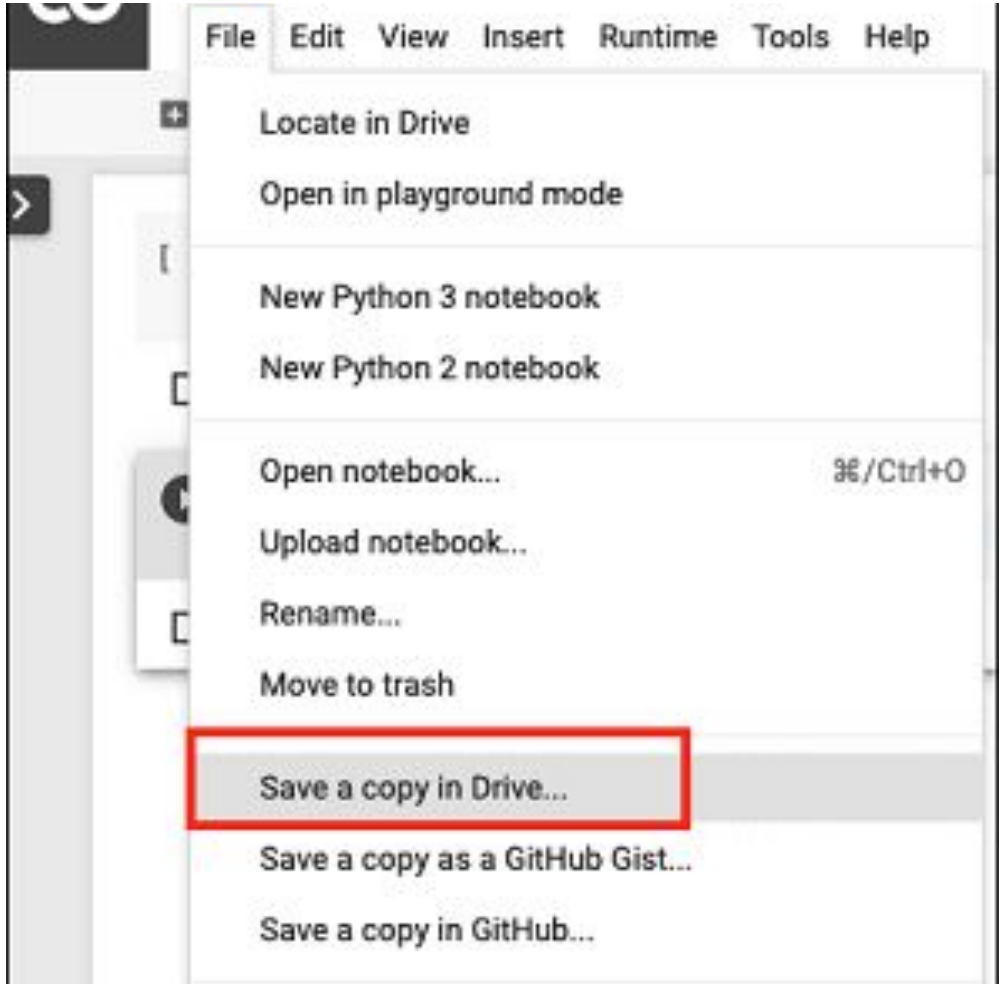
How to download the .ipynb file



Setup

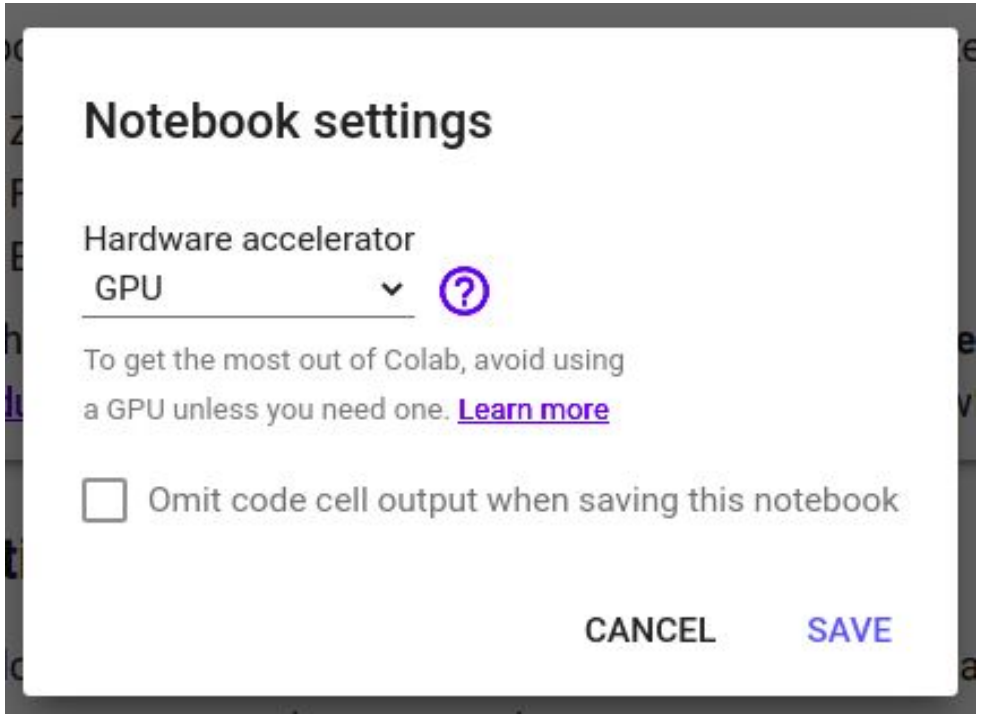
IMPORTANT:

Create your own copy of the COLAB notebook!



Others:

- Activate/deactivate GPU: Runtime -> Change runtime type
- **Note:** If you use for too much time the GPU, your account will be limited to CPU for 24h.



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The LAB starts now !