



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

# APAI Lab5: DNN Definition & Training

**Lorenzo Lamberti, Francesco Conti, Alessio Burrello,  
Nazareno Bruschi, Davide Nadalini, Alberto Dequino.**  
*(University of Bologna)*

lorenzo.lamberti@unibo.it

f.conti@unibo.it.

## 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: [link](#)
- 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.

Assignment 1 (due 25/11/2021)

Submission status

Submission status	Draft (not submitted)	
Grading status	Not graded	
Due date	Thursday, 25 November 2021, 4:00 PM	
Time remaining	9 days 5 hours	
Last modified	Tuesday, 16 November 2021, 10:56 AM	
File submissions	name of the file	
	 LAB1_APAI_Lorenzo_Lamberti.ipynb	16 November 2021, 10:56 AM
Submission comments	► Comments (0)	

**LAB1 DEADLINE:**  
**25/11/2021 at 4PM**  
**(1 week from today)**

edit submitted files

Edit submission

Remove submission

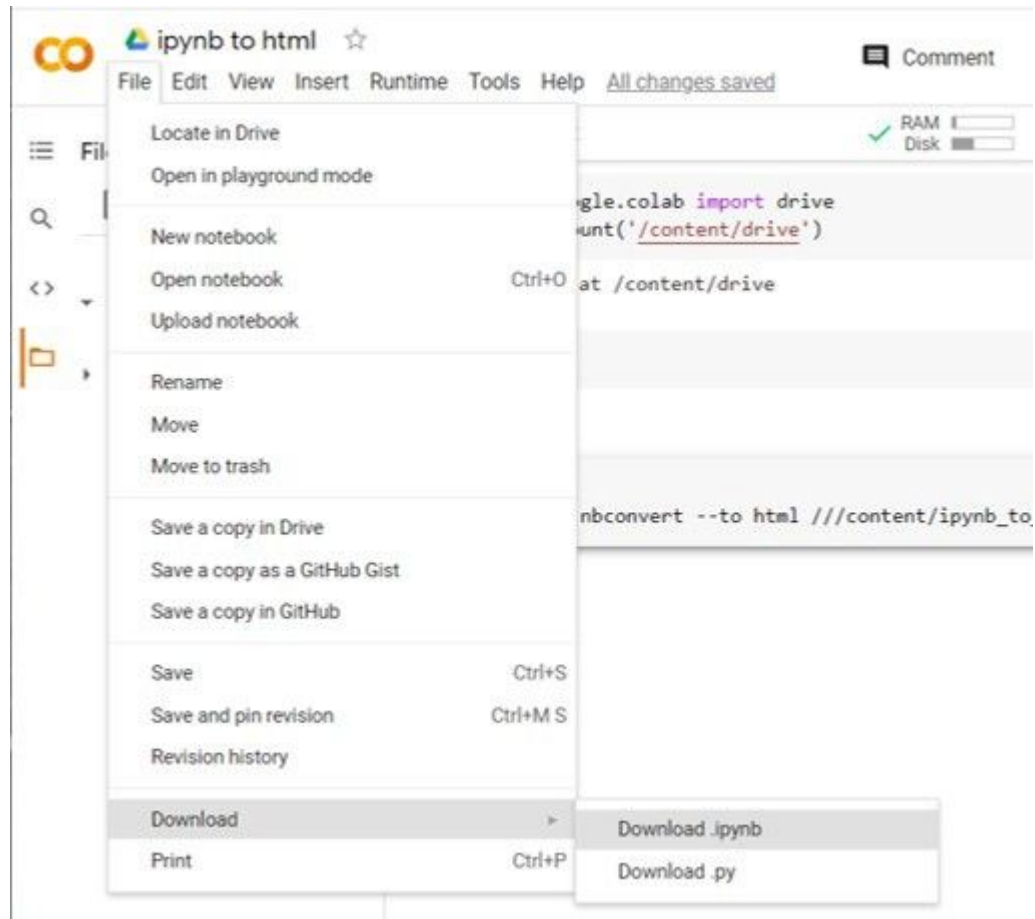
You can still make changes to your submission.

**submit**

Submit assignment



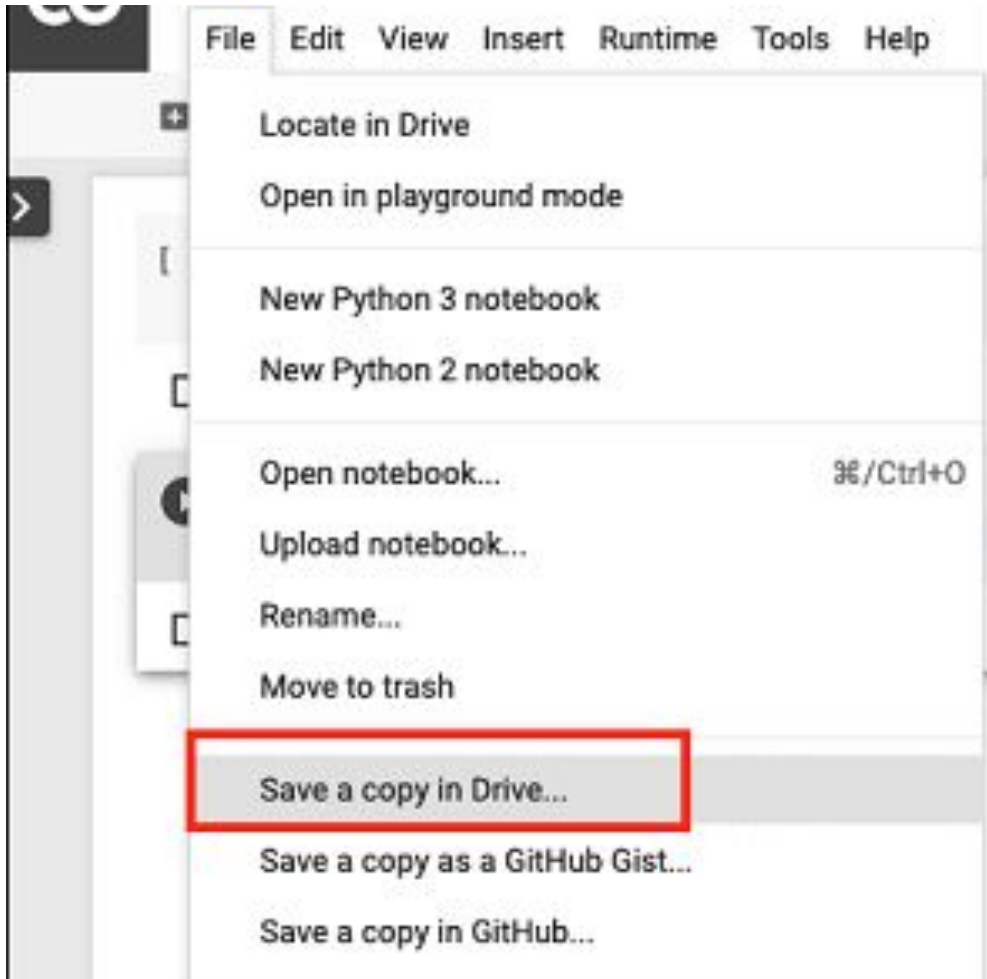
# How to download the .ipynb file



# Setup

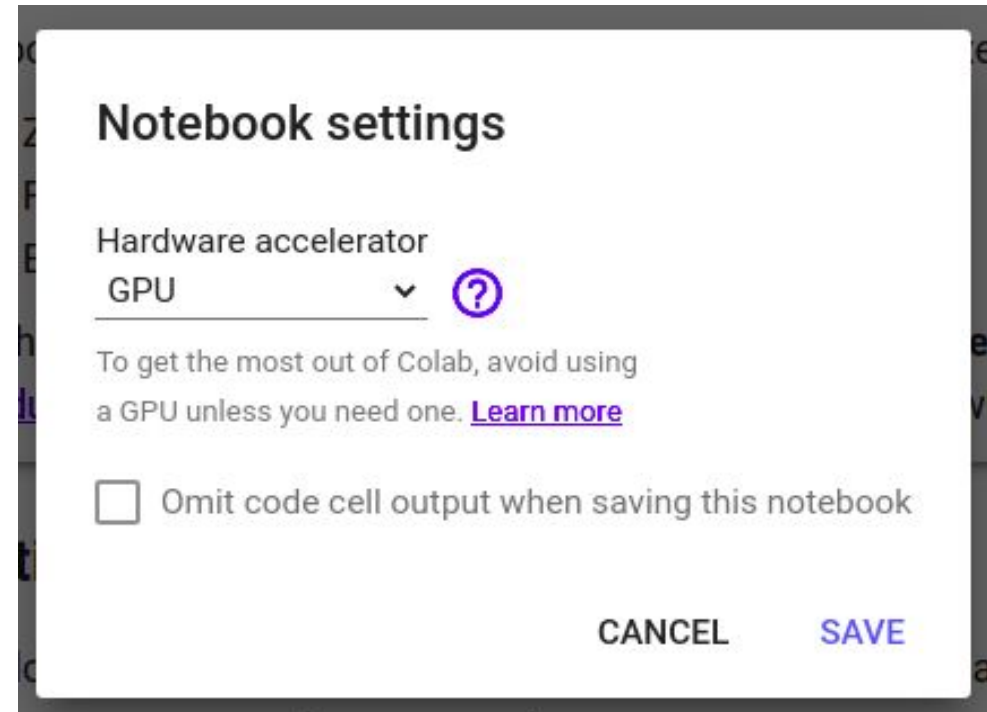
## IMPORTANT:

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 !

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