

TP: CNN

Tuesday 21st November, 2023

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Deadline: Wednesday 6th December, 2023, 23:59

1 Objective

The objective of this TP is to understand and implement a convolutional neural network (CNN) using the CIFAR dataset.

Throughout this TP, you will have considerable freedom to explore and define your own CNN architecture. We will utilize PyTorch, which follows a structure similar to the one introduced in the computational graph TP.

Feel free to experiment with various architectures and hyperparameters to gain insights into what parameters are crucial and how performance is influenced by these parameters.

Provide a comprehensive explanation of your choices in a formal report, emphasizing the rationale behind your architectural and hyperparameter decisions.

You have to send a **formal** report and your code.

In addition to the formulas and derivations we ask you also to describe in your report what is the **padding** and the **stride** used with convolution layers, why are they important and what differentiate them.

General instructions

You have to put your work in *cyberlearn* saved in a zip file using as name this format: TP_CNN_LASTNAME_Firstname.