Exercise Session	EPFL
CIVIL-459	School of Civil Engineering
Spring 2022	**Prof. Alexandre Alahi**
Lab 2	
Deadline: 22 March	

Getting Started

Familiarize yourself with pytorch using the *Tutorial 1* and *Tutorial 2* notebooks. Additionally, you can check the tutorials found on the Pytorch official website.

Problem Set 2

The problem set contains three notebooks. The first notebook helps you implement softmax using just python. The second notebook explains how to use Pytorch to build a simple fully connected neural network.The third one is to evaluate the performance of the trained models. Follow the problem statement of each exercise. Here are some notes:

1. The neural network should have at least 2 layers but can be as large you want.

2. Set up the forward pass by connecting the different layers of the neural network. Do not forget to use activation layers.

3. Create the network by specifying the input and output size. Then choose the optimizer you want to use (e.g., SGD or Adam). You should tune the parameters of the optimizer.

4. Implement the training process and save your best model.

5. Finally, for us to test your code and get an accuracy, you should fill the evaluator notebook where you should load the saved model, input to it the data and get the prediction labels. We will be using our own test data for grading.

Deliverables

You need to submit three jupyter notebooks and two trained models (Softmax and Pytorch) into the moodle.

Helpful References

- Pytorch Documentation: `http://pytorch.org/docs/0.3.1/`

- Pytorch Tutorial: Official link, Collection