

# IL2230 HADL

## Lab1: Handwritten Digits Recognition from MLP to CNN

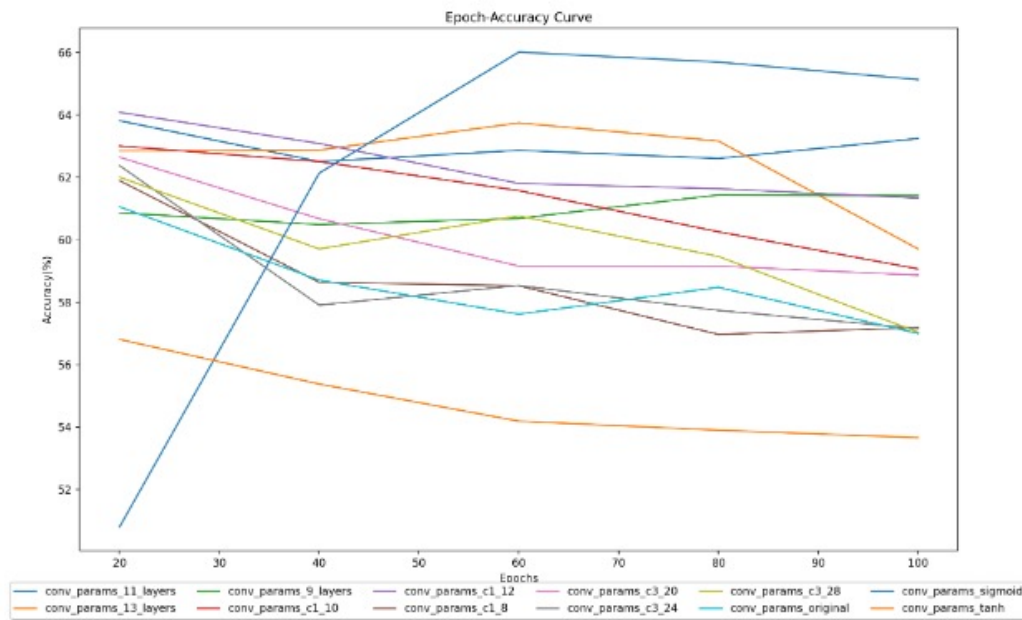
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### Part 1: CNN in Pytorch

#### 1.1 Variance in accuracy based on the number of features maps in layer 1 and 2.

To study the variance in accuracy in the CNN we create a Python code that iterates through the different values that we want to test in each convolutional layer. In order to achieve the best possible results we have studied which number of epoch is optimal to use for the training, as we can see in the following graph:



#### 1.2 Variance in accuracy based on the number of layers in the network.

#### 1.3 Variance in accuracy based on type of activation layer.

### Part 2: Handwritten Digits Recognition

#### 2.1 Variance in accuracy based on number of neurons for layers 1 and 2.

#### 2.2 Practical information and comparison using pytorch profiler.