Deep Learning Lab-2018

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Report provides a short summary of deep learning lab's 2nd exercise sheet. The core idea was to implement the convolutional neural network CNN for the classification of MNIST (hand written pictures of digits 0-9) in Tensor flow. Classification model is intended to optimize with suitable choice of hyper parameters. 2 layer CNN has been used which is not as deep as other CNNs used recently for more complex problems.

Two layers CNN consists of two convolutional layers with pooling after each layer. Optimal activation function are required to used at hidden layers before the fully connected layers. Softmax activation is used for classification of 10 classes.

Results

Learning Rate	0.1	0.01	0.001
Evaluation loss	0.0367	0.0289	0.0288
Training loss	0.0287	0.017	0.023
Accuracy	0.991	0.990	0.9901

Learning Rates

In attached json files shows the mentioned results. I did not understand the exercise thoroughly. Implementation of CNN in Tensorflow was little bit blurred for me. The ideas were complex and time consuming for me but I will hopefully improve in the coming exercises.