
Programming Assignment #2 of WI 21 CSE 251B

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Abstract

This paper is a report for the programming assignment 2 for Lecture CSE 251B. In this report we build a simple neural network only relies on simple libraries like Numpy without any higher level machine-learning libraries invoked. This naive neural network can support multiple fully-connect layers and within each layer we can implement different activation functions, moreover, we also support regularization to prevent over-fitting from happening. We apply our model to the Fashion MNIST data-set and achieve expected precision.

1 Gradient check

2 Implment the model

3 Experiment with regularization

4 Experiment with activations

5 Individual contributions to the project

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