

CS5597: Directed Reading

Distributed Classification for Deep Learning

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Regarding the progress of the assigned task I'm implementing single class of MNIST dataset in Tensorflow. Expected approach is to split the dataset in such a way that only single class is passed through the model so we can find the accuracy of it and compare the results with whole MNIST dataset passed through the model. The problem area is splitting the dataset as it has one hot encoding. In order to resolve this issue I have gone through some research paper discussing binary classification and features extraction of MNIST dataset.

In "**Handwritten digit classification using the mnist data set.**" paper is informative in identifying different features of MNIST dataset.

CNN: Single-label to multi-label clarifies the insights of Single label classification

All the information gathered from above mentioned papers helpful in implementing the single class as an input in tensorflow.

- Wu, Ming, and Zhen Zhang. "Handwritten digit classification using the mnist data set." *1Technique report of course project for CSE802: Pattern Classification & Analysis, MSU, Spring* (2010).
- Wei, Yunchao, Wei Xia, Junshi Huang, Bingbing Ni, Jian Dong, Yao Zhao, and Shuicheng Yan. "CNN: Single-label to multi-label." *arXiv preprint arXiv:1406.5726* (2014).