CS5597: Directed Reading
Distributed Classification for Deep Learning
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Project Progress Report
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Objective:

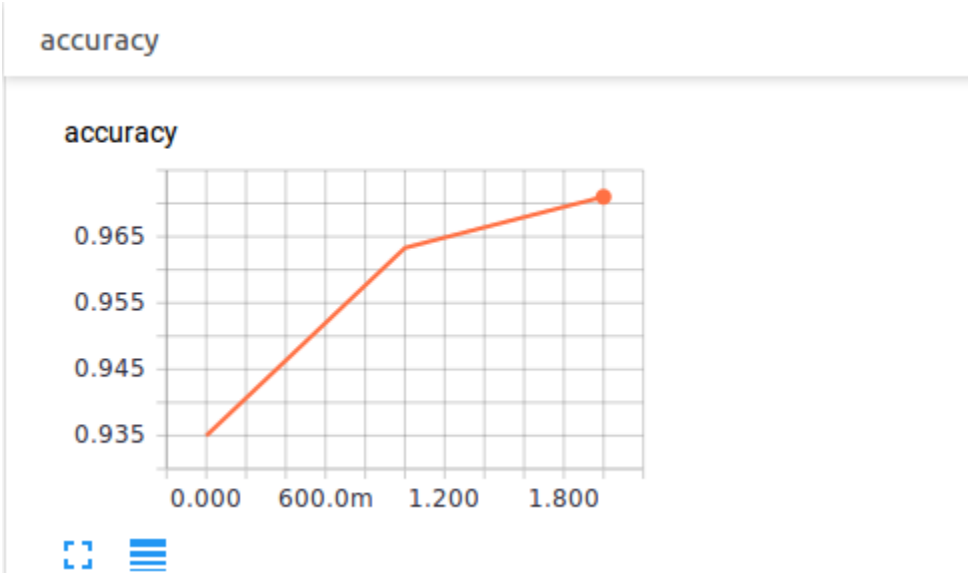
To implement training of one class in MNIST dataset so the model can learn only one class.
(The MNIST database (Mixed National Institute of Standards and Technology database) is a large database of handwritten digits that is commonly used for training various image processing systems. The database is also widely used for training and testing in the field of machine learning.)

Implementation:

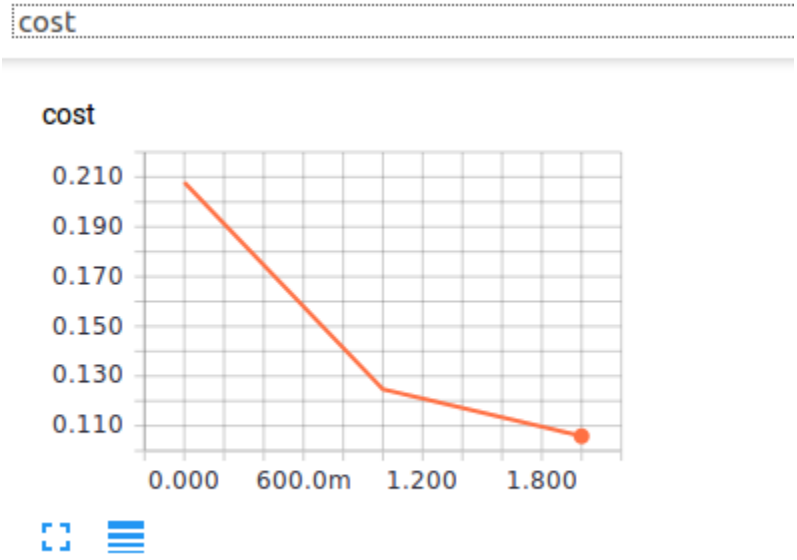
The Tensorboard is a visualization tool used to understand, debug and optimize tensor flow programs.
The tensor board is used to compare the weights, accuracy and cross entropy obtained from the model using 10 classes and the model using one versus other classes.

Model using 10 Classes:

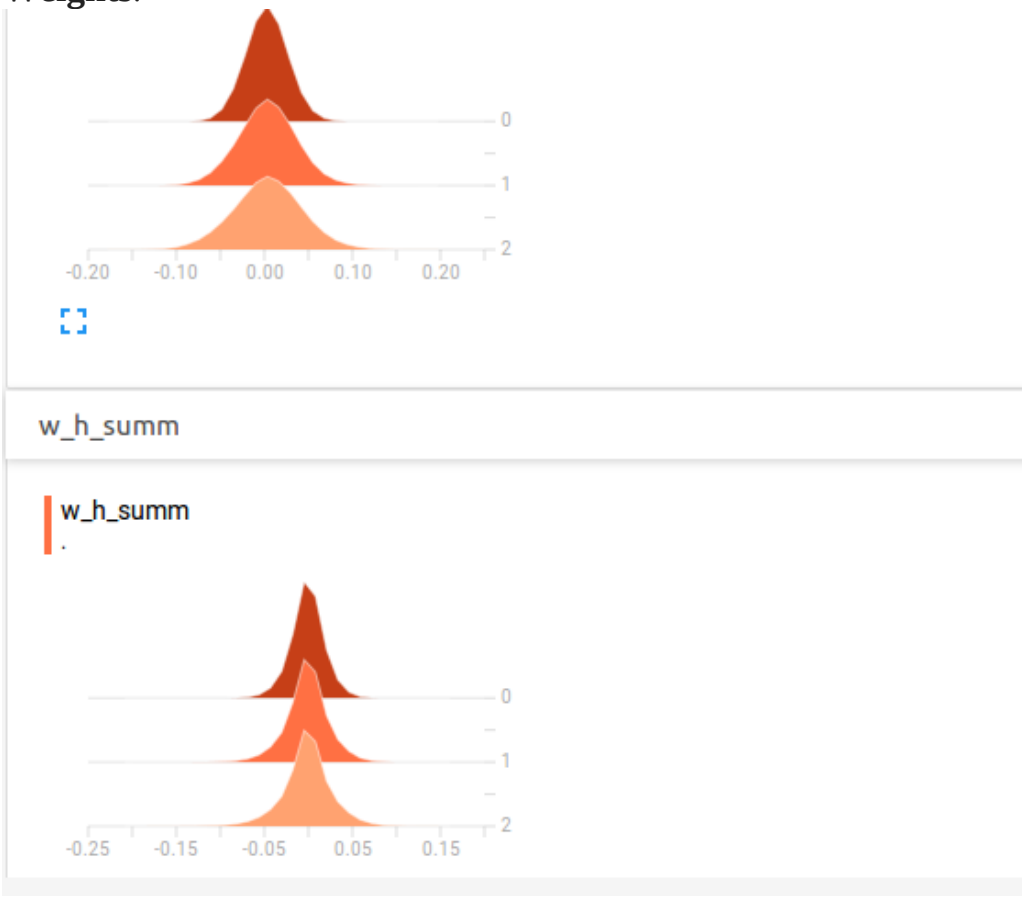
Accuracy:
The accuracy of the model gradually increased.



Cost
The cost of the model gradually decreased.



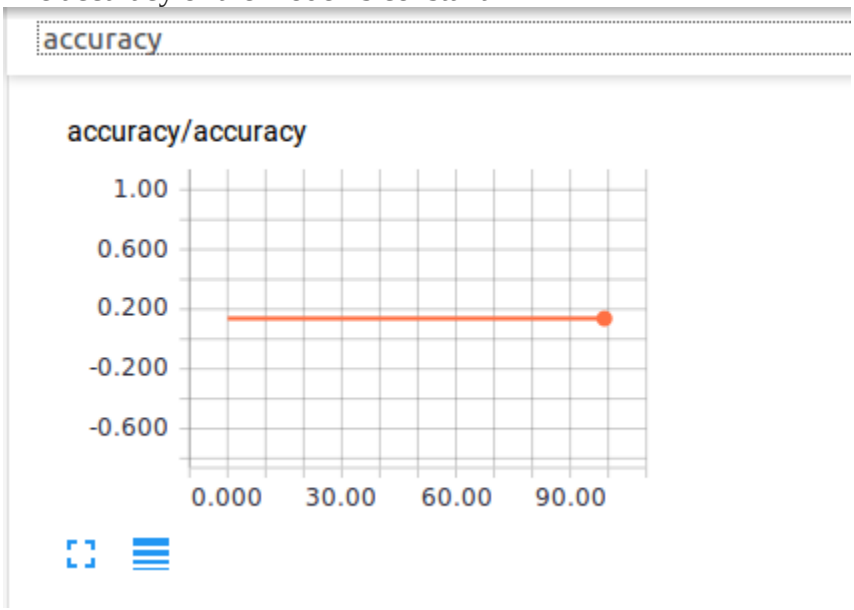
Weights:



One Class versus Other Model:

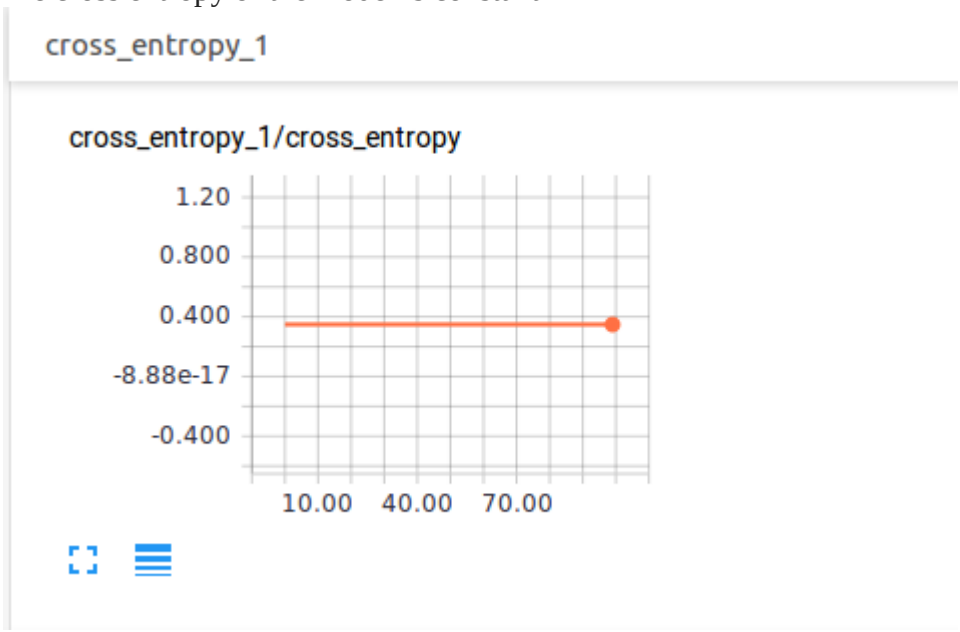
Accuracy:

The accuracy of the model is constant



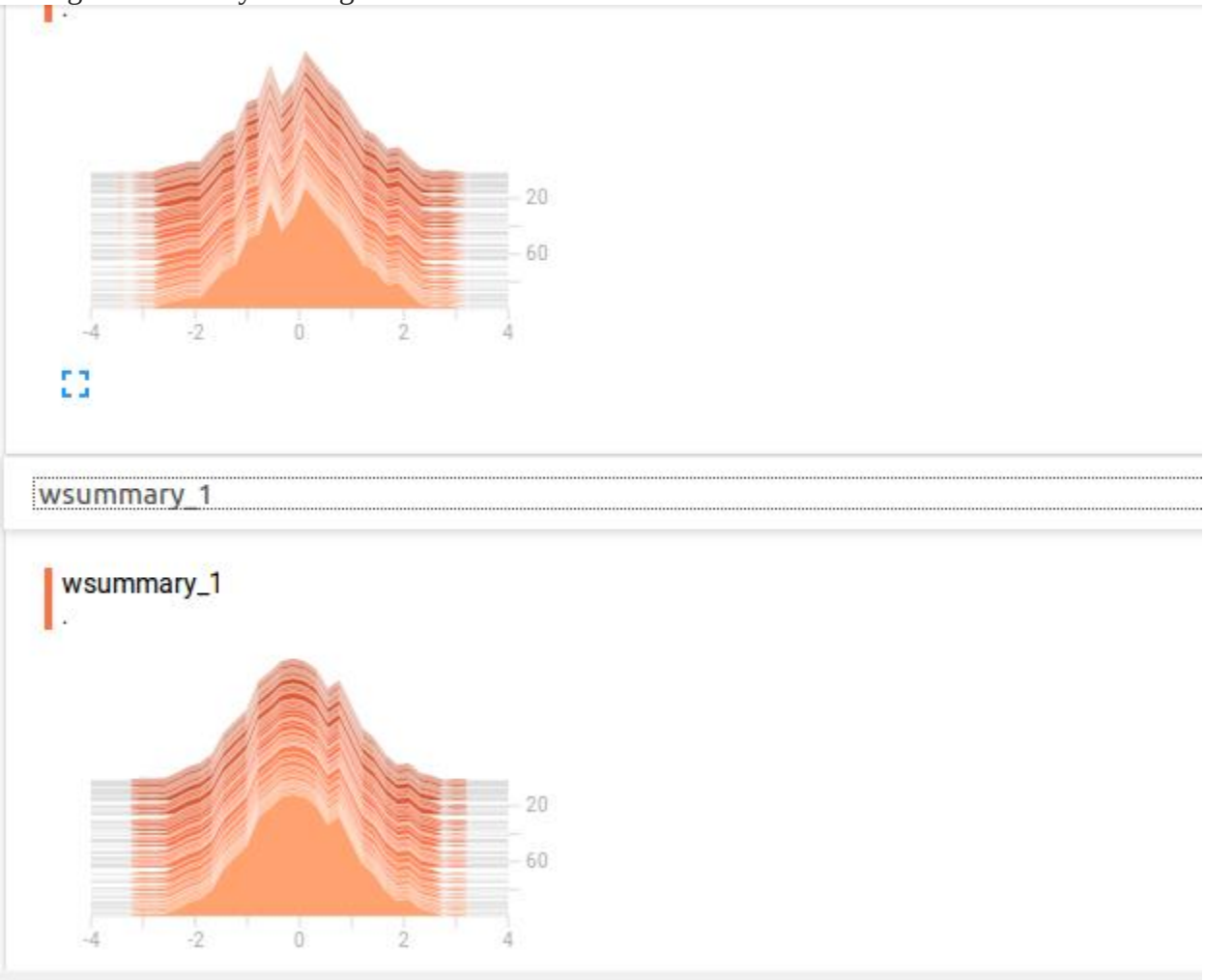
Cross-entropy:

The cross entropy of the model is constant



Weights:

Histogram summary of weights



Future Approaches:

Implement visualization of activation of neurons in models.