Deep Learning PA_3

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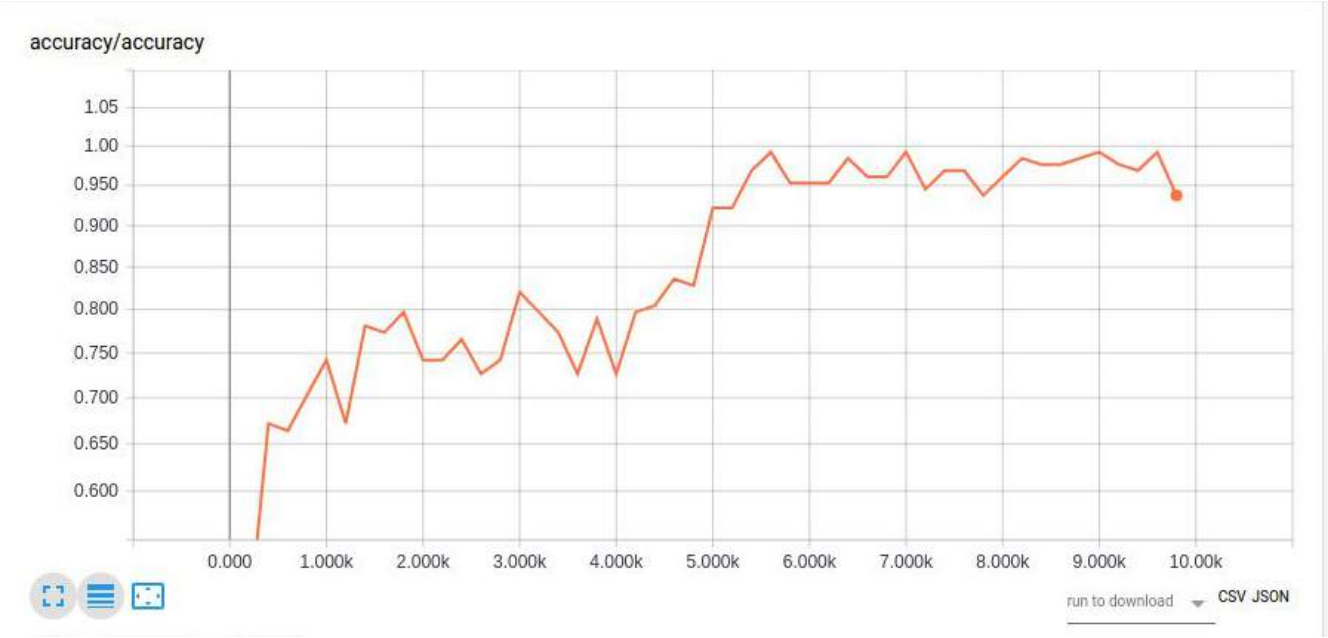
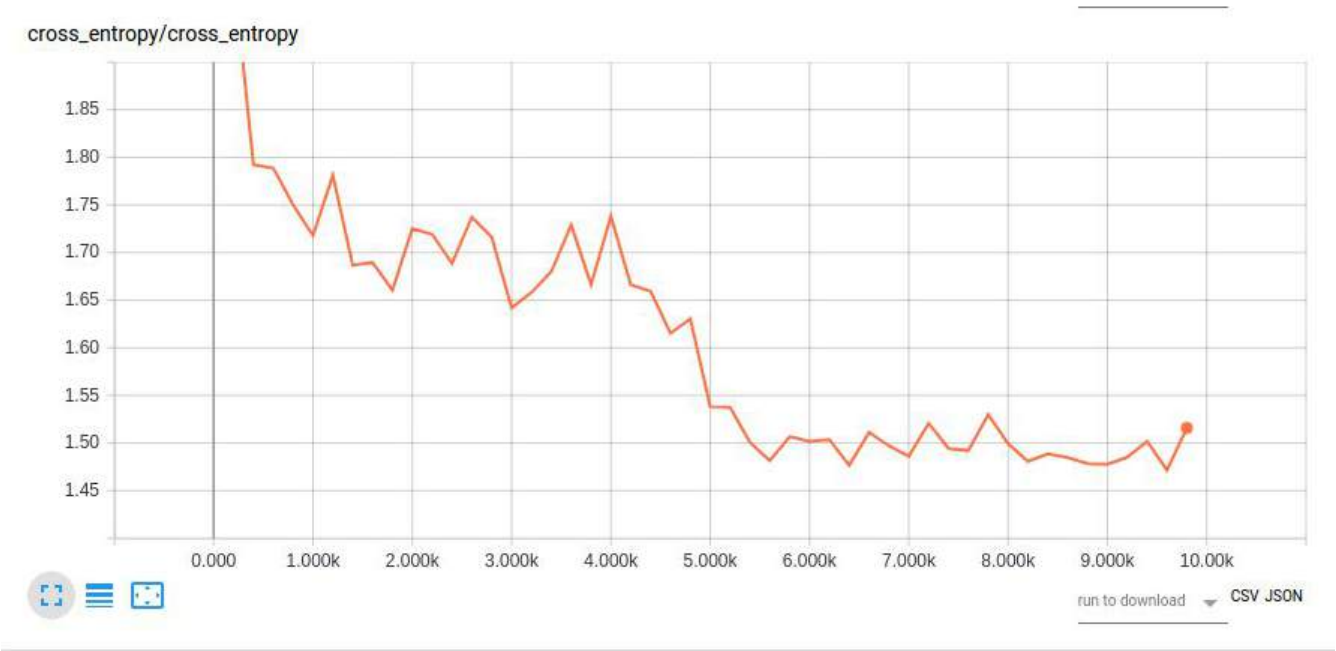
EP14B035

1)

BasicLSTM

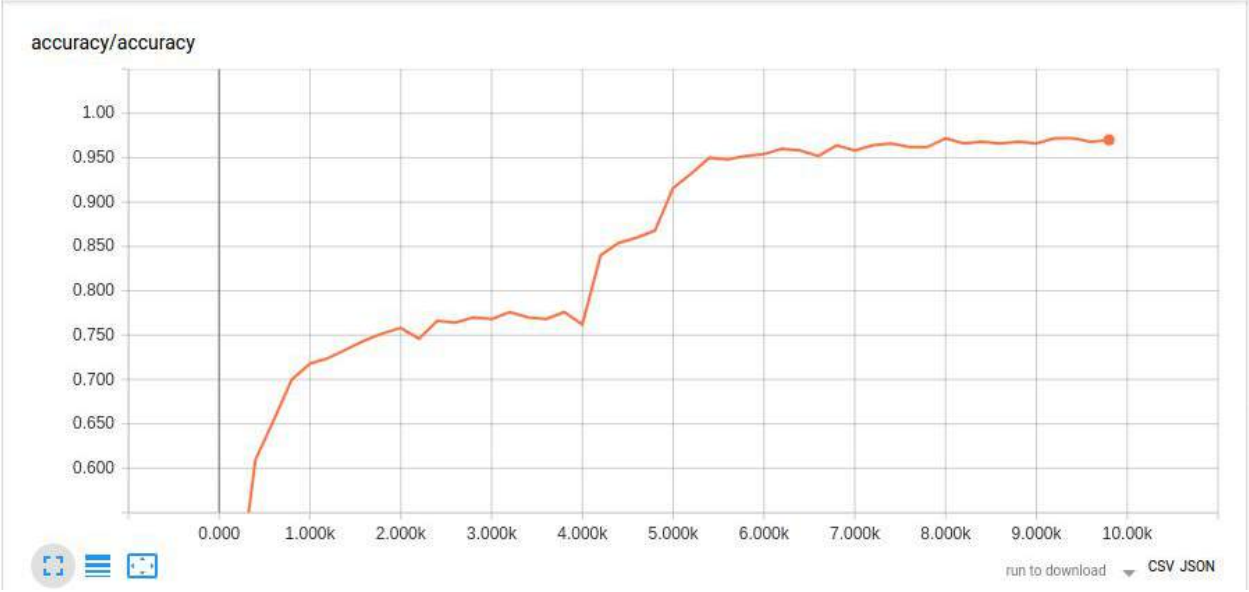


Training Accuracy

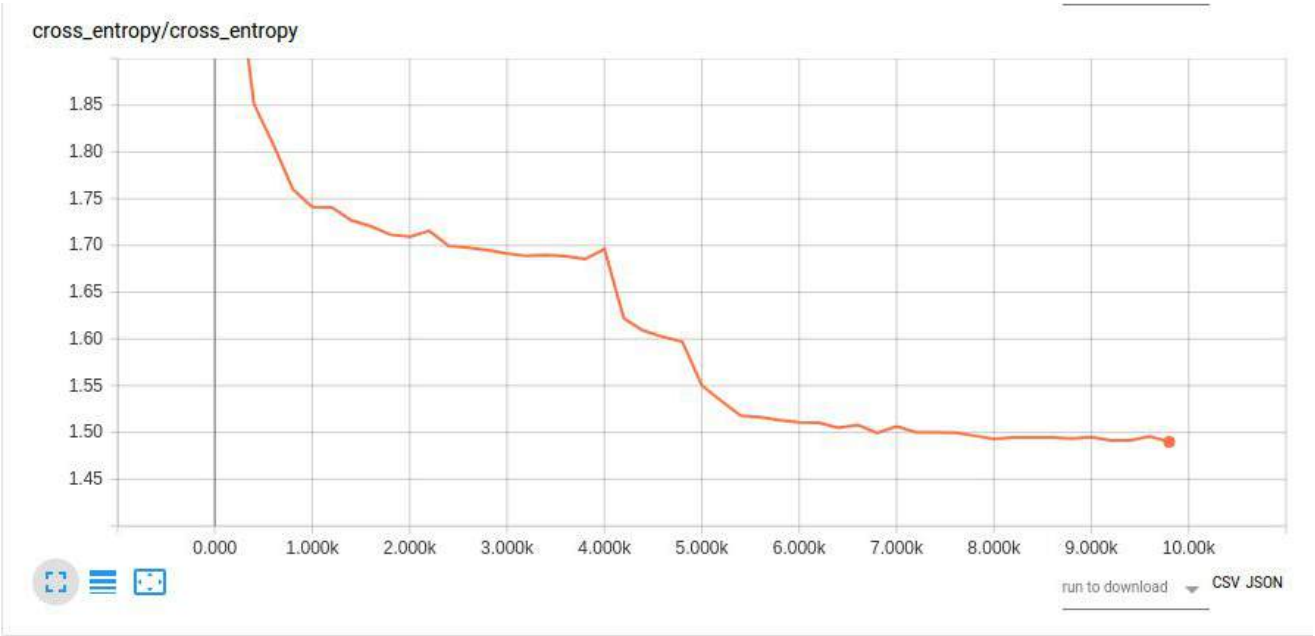


Training Loss

<u>Training error over 10,000 images</u> = 0.96719998

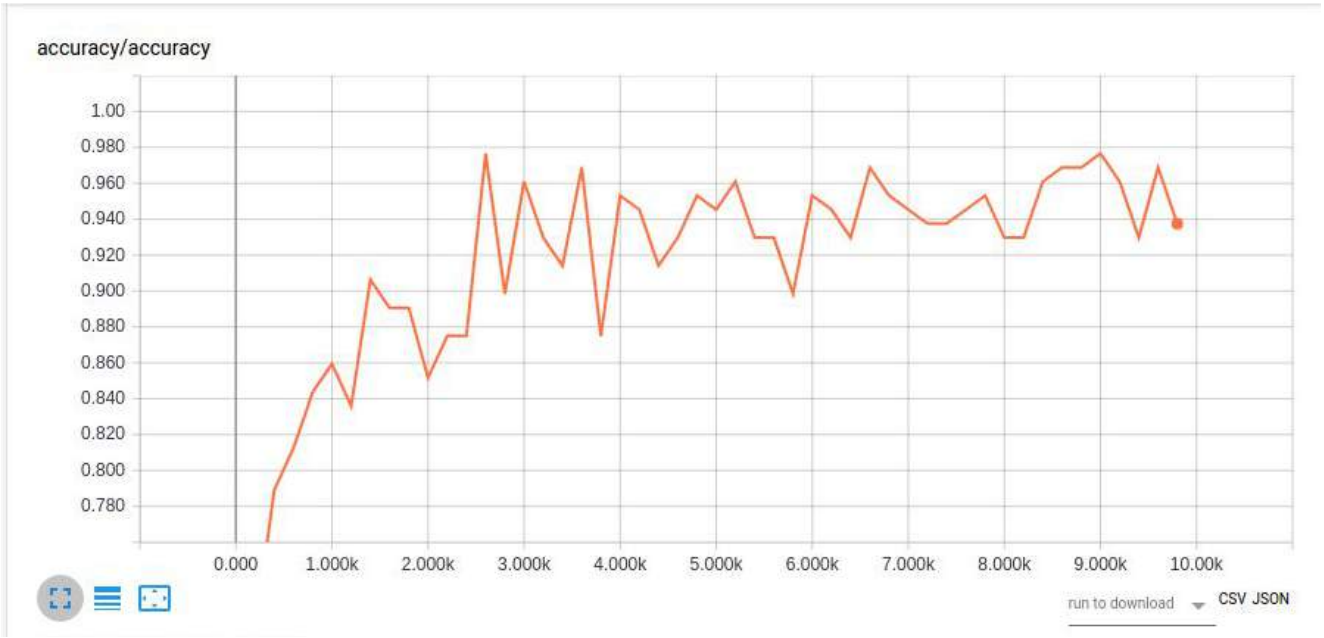


Validation Accuracy

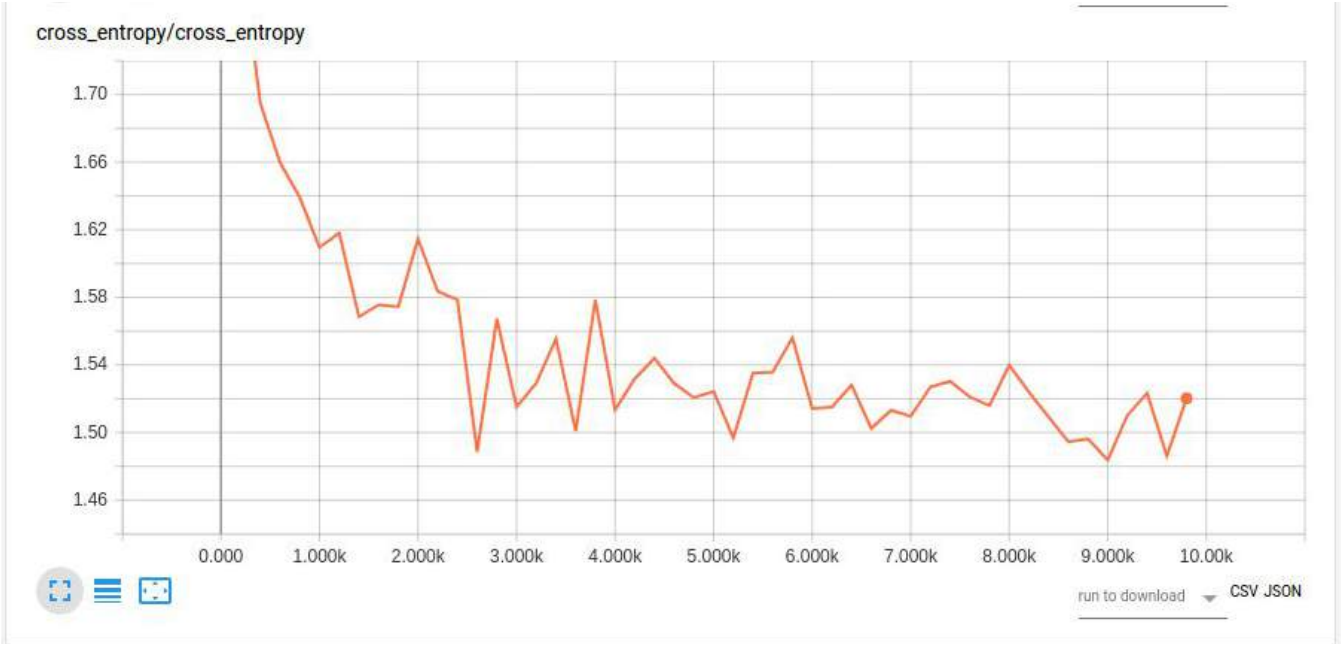


Validation loss

BasicRNN

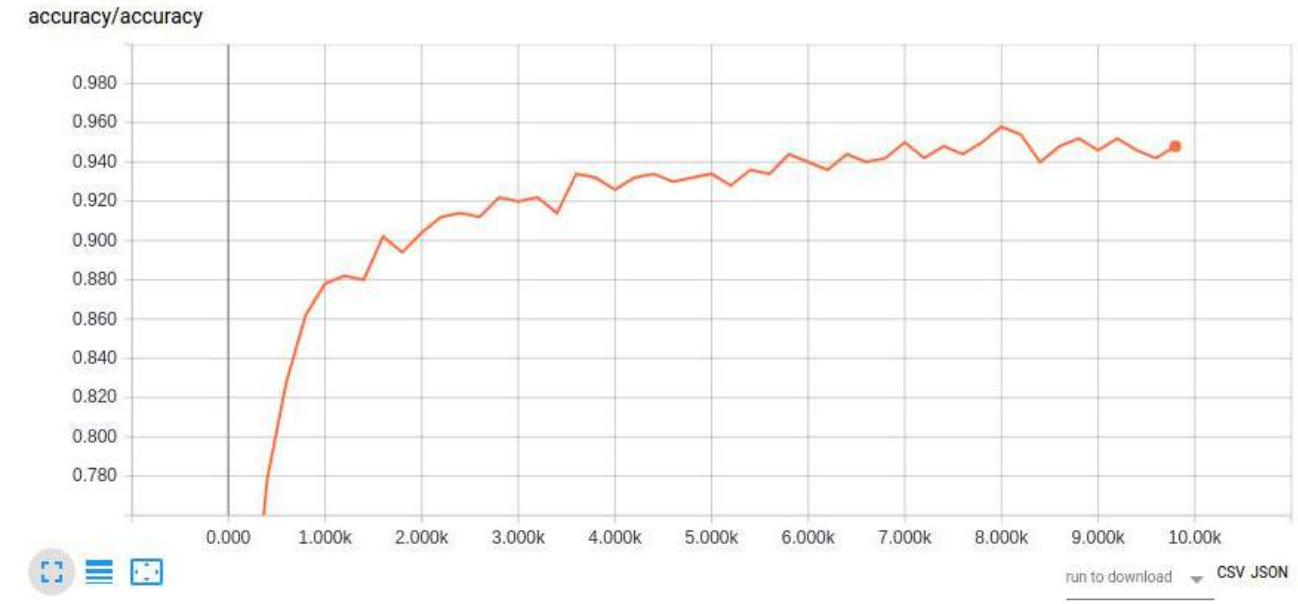


Training Accuracy

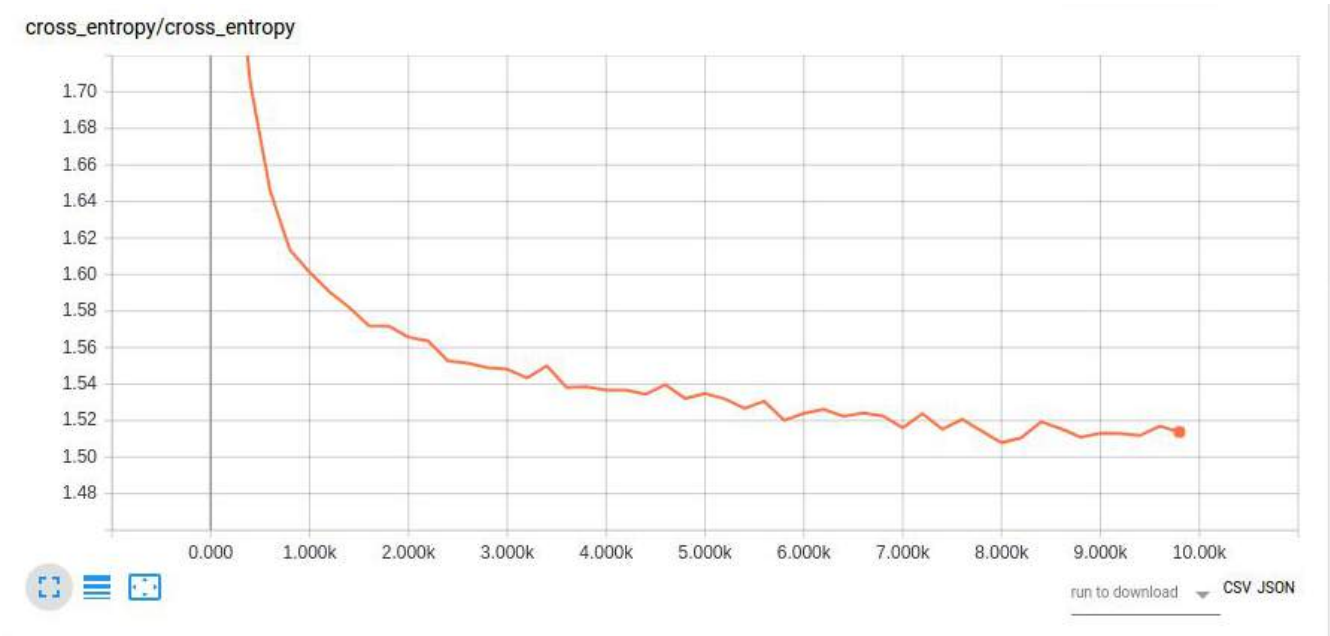


Training Loss

<u>Training error over 10,000 images</u> = 0.95459998

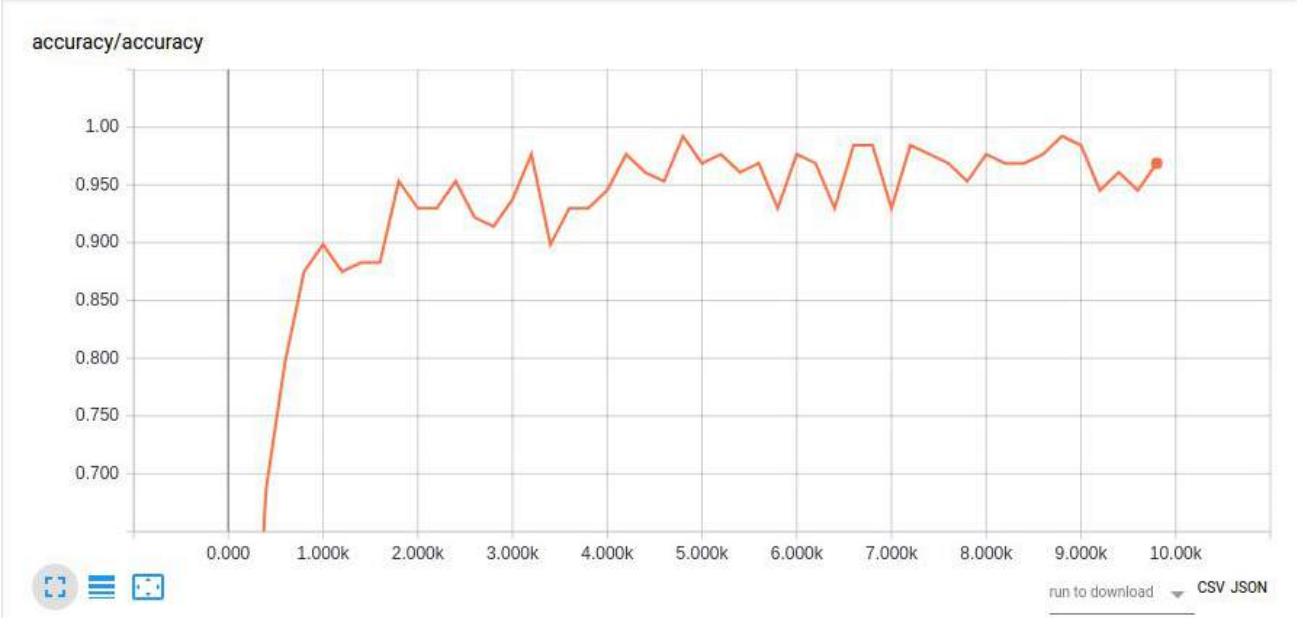


Validation Accuracy

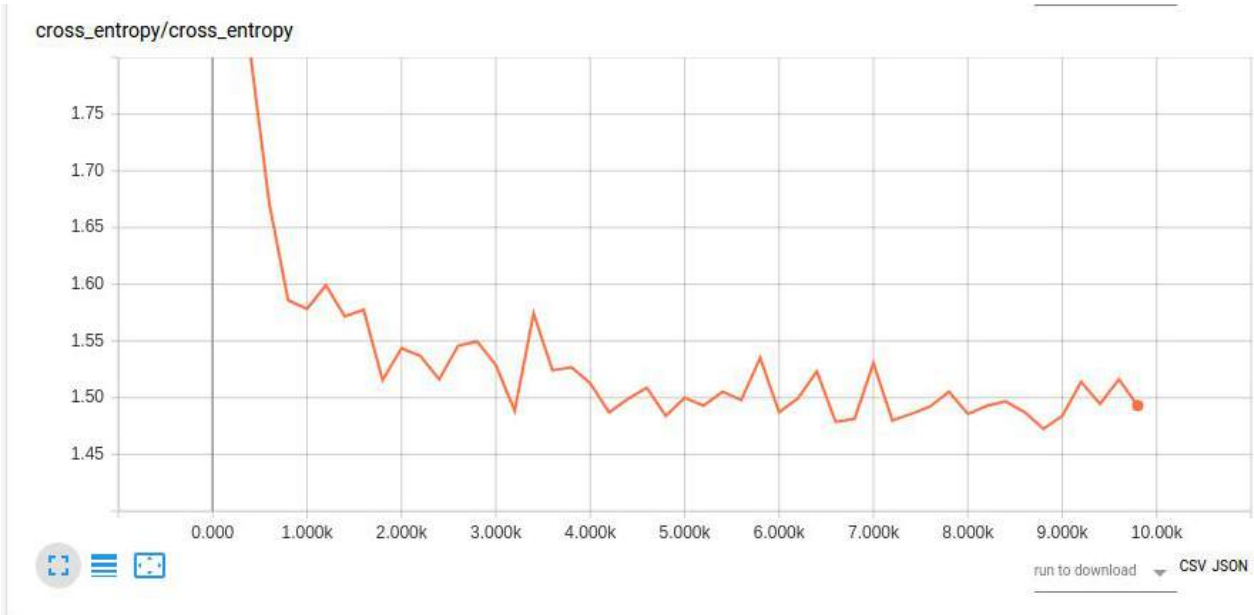


Validation Loss

BidirectionalRNN

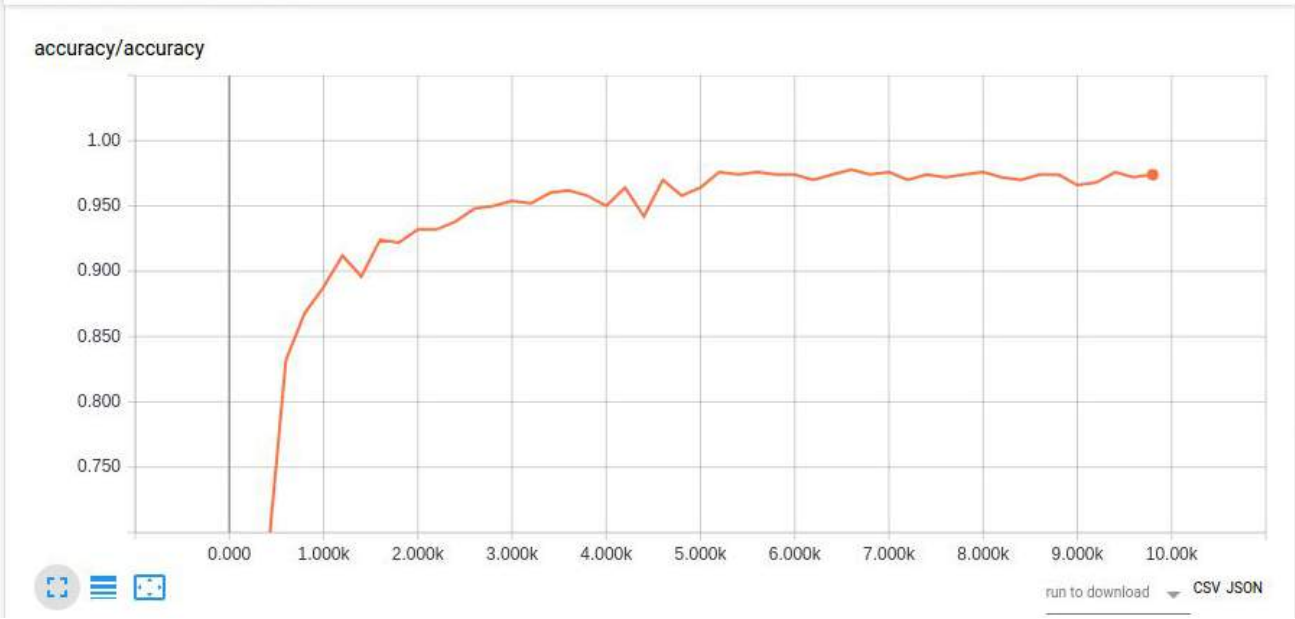


Training Accuracy

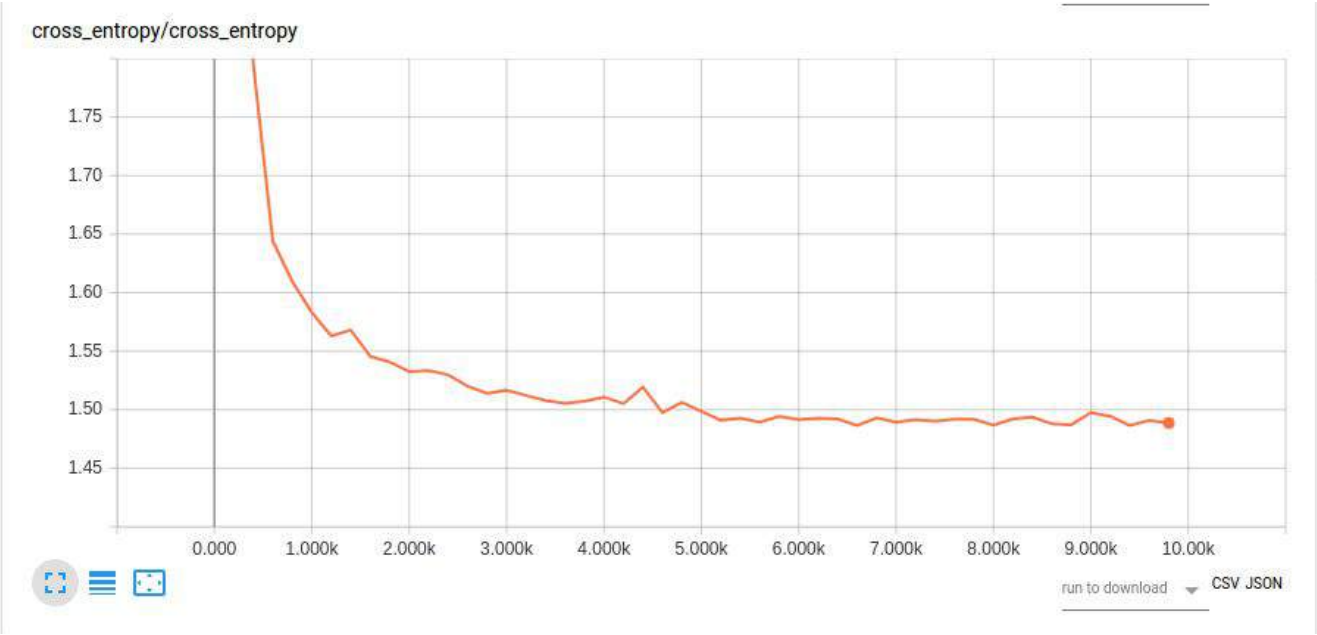


Training Loss

<u>Training error over 10,000 images</u> = 0.96929997

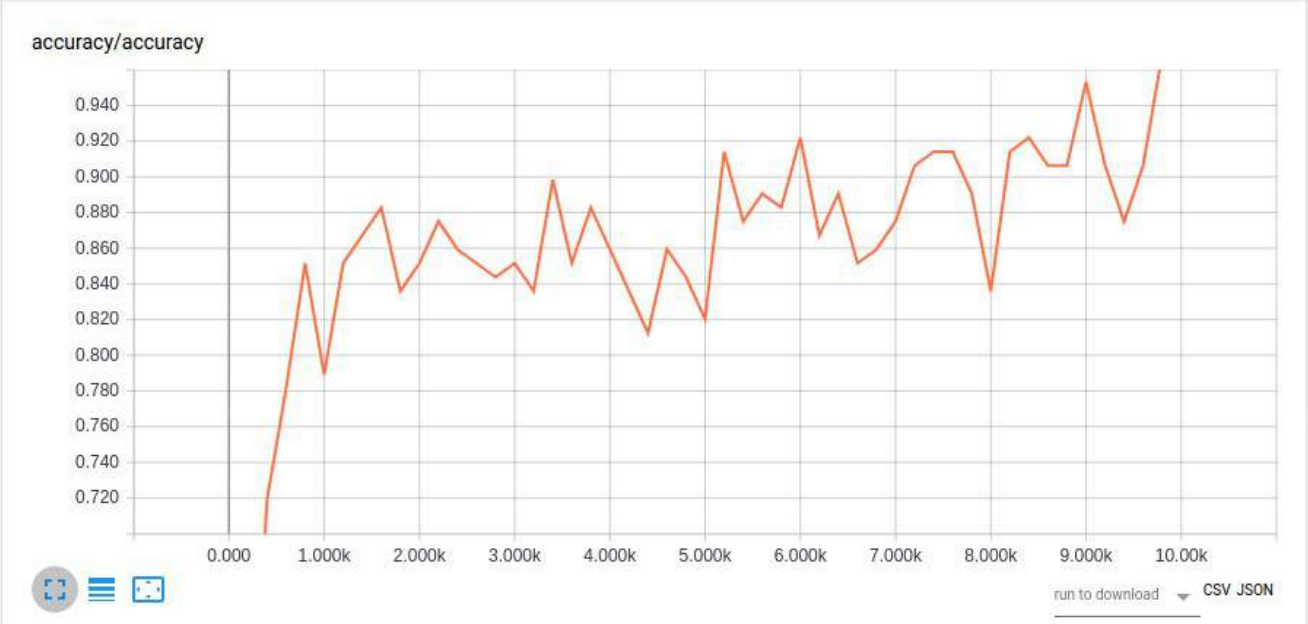


Validation Accuracy

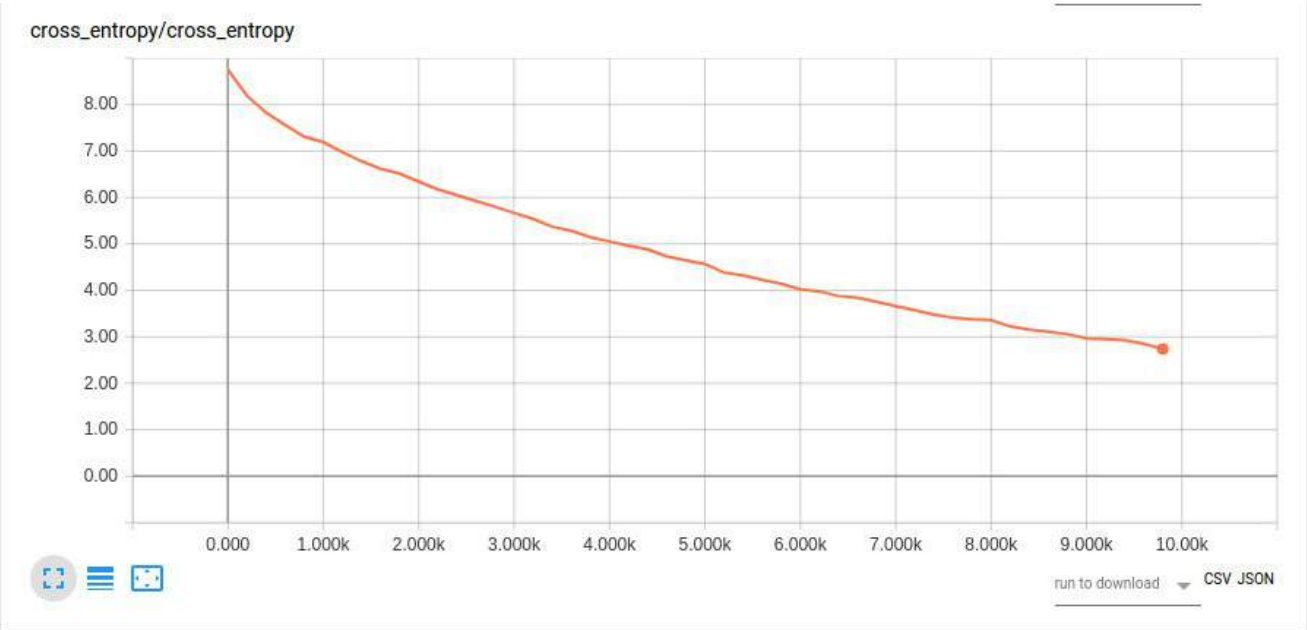


Validation Loss

LSTM with L2 regularization for neural net weights



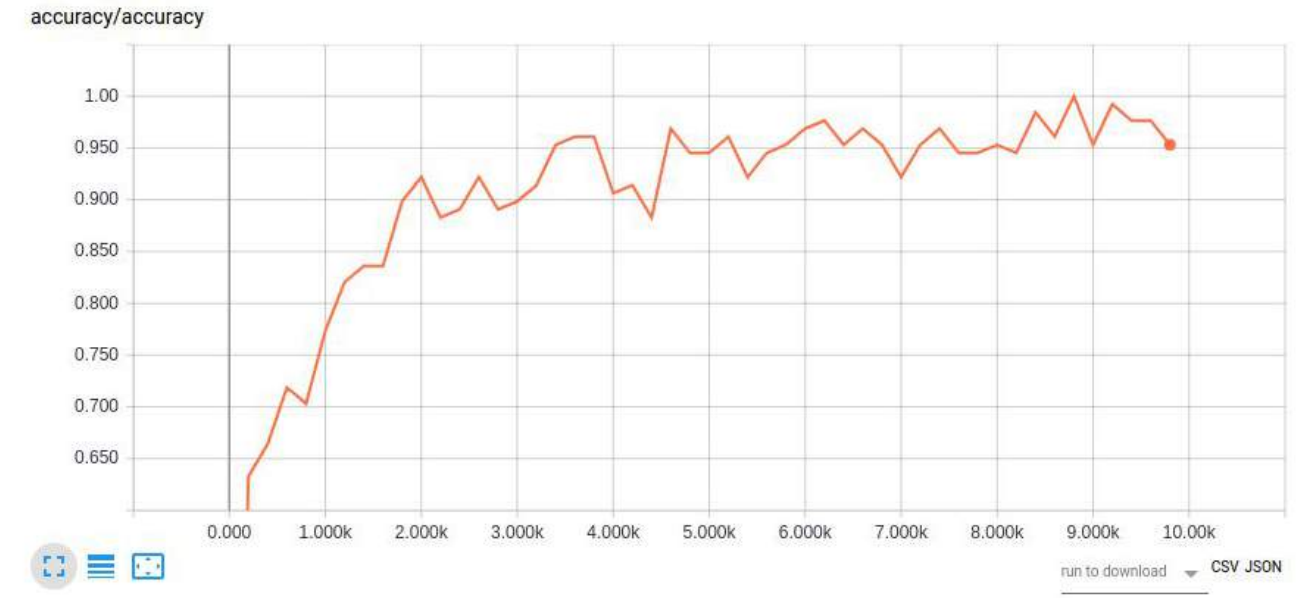
Training Accuracy



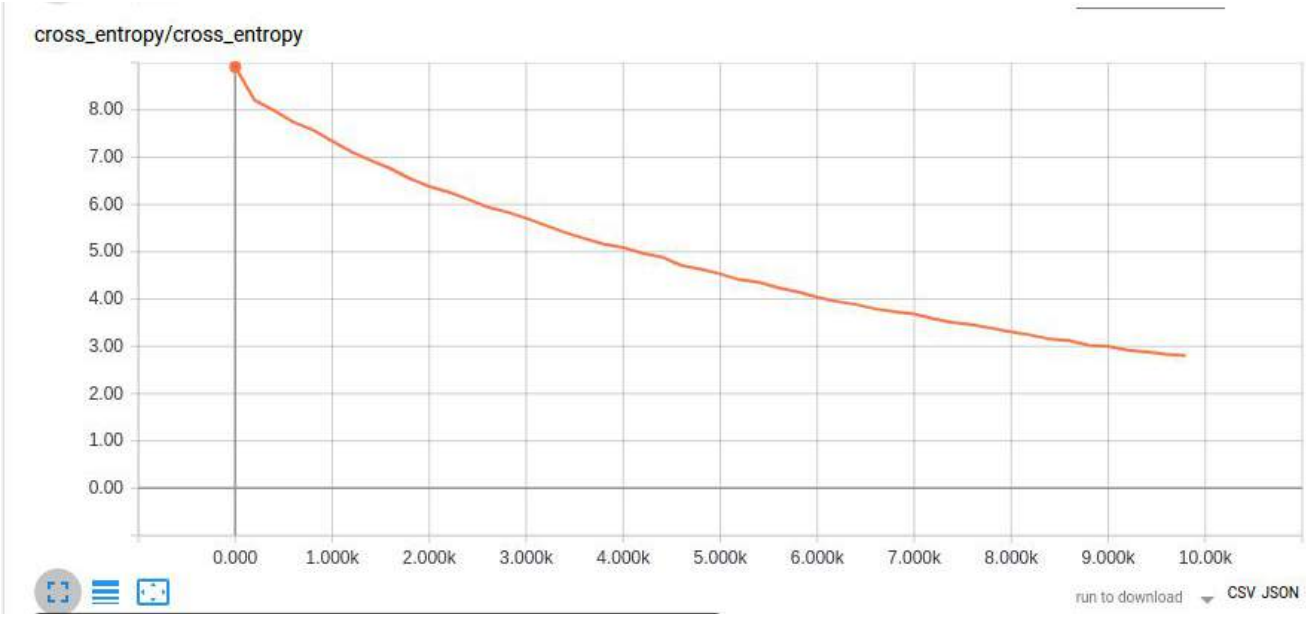
Training Loss

<u>Training error over 10,000 images</u> = 0.95539999

RNN with L2 Regularization for weights of Neural Network



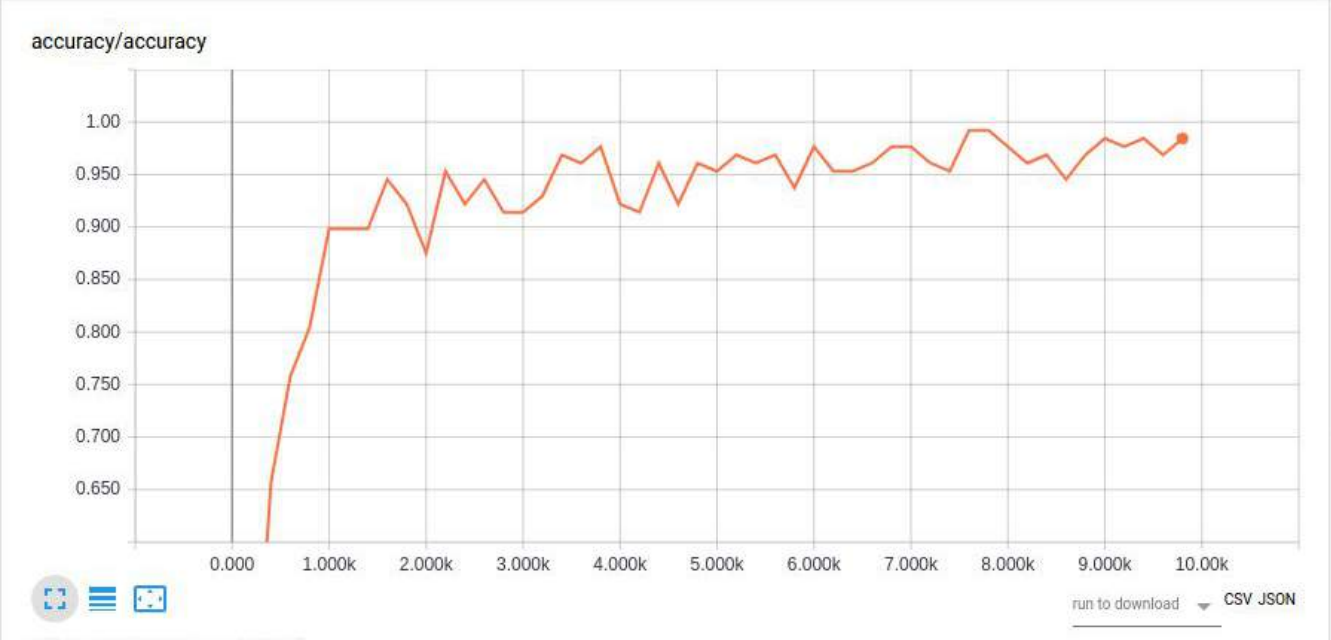
Training Accuracy



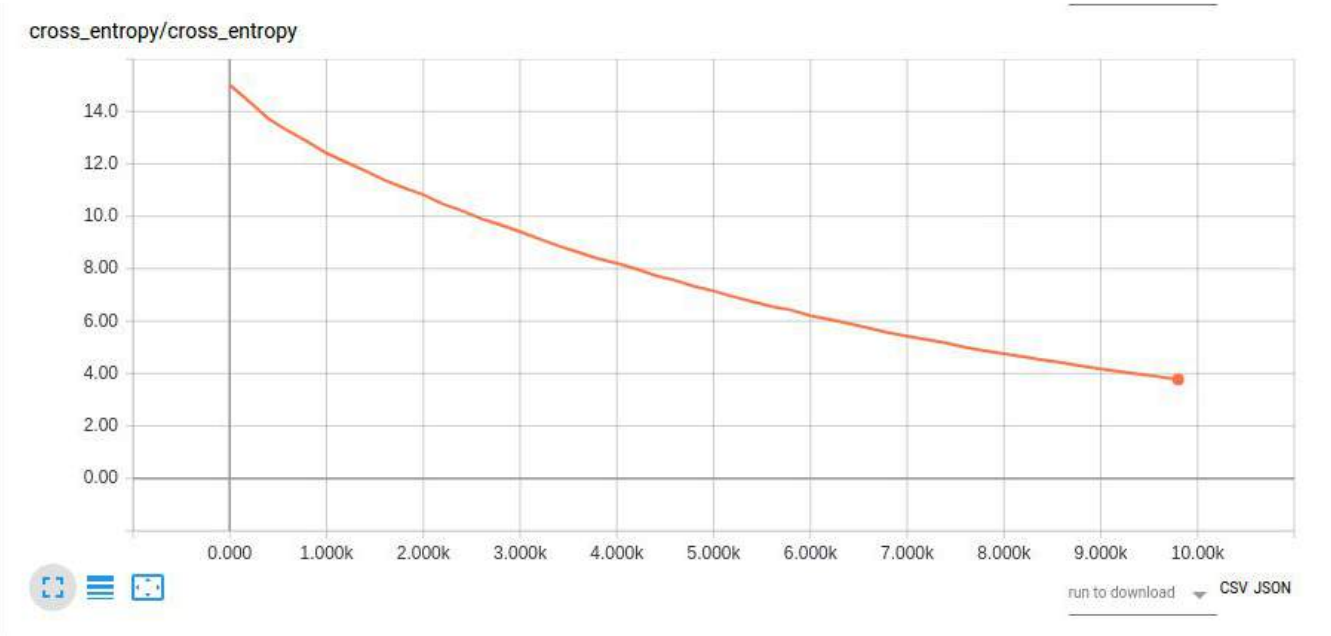
Training Loss

<u>Training error over 10,000 images</u> = 0.95929998

BidirectionalRNN with L2 regularization for weights of Neural Network



Training Accuracy



Training Loss

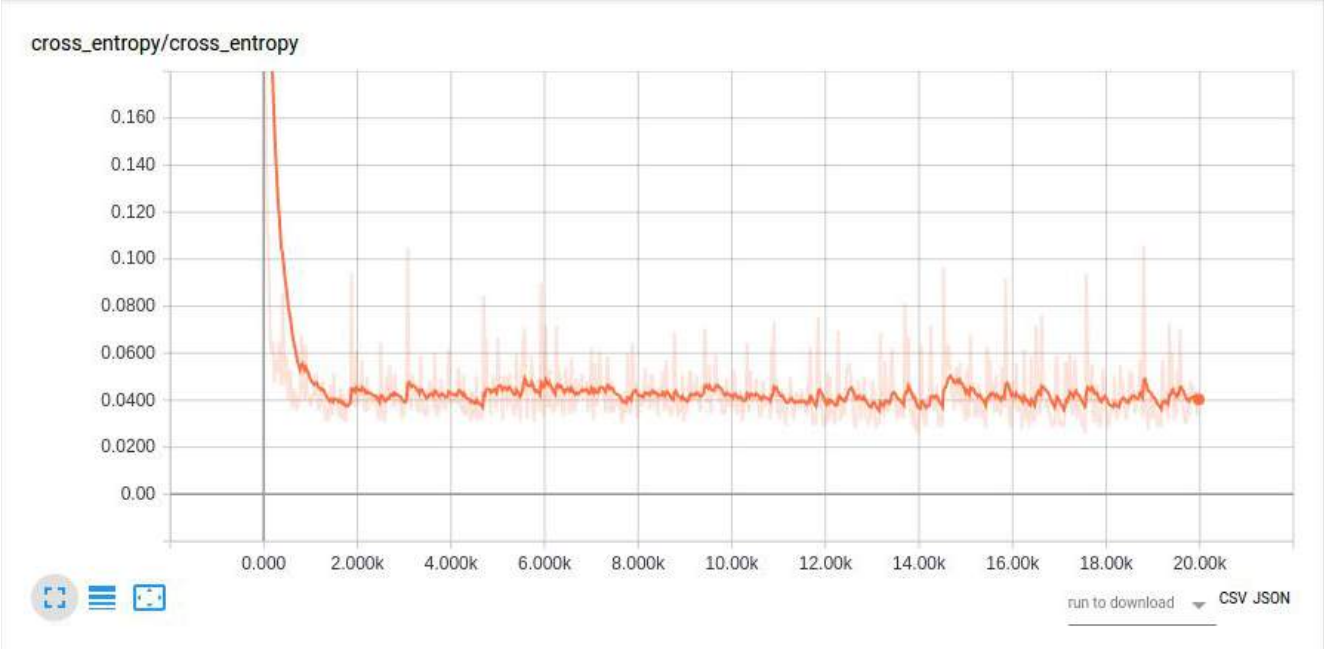
<u>Training error over 10,000 images</u> = 0.96649998

True label v/s predicted for BasicLSTM

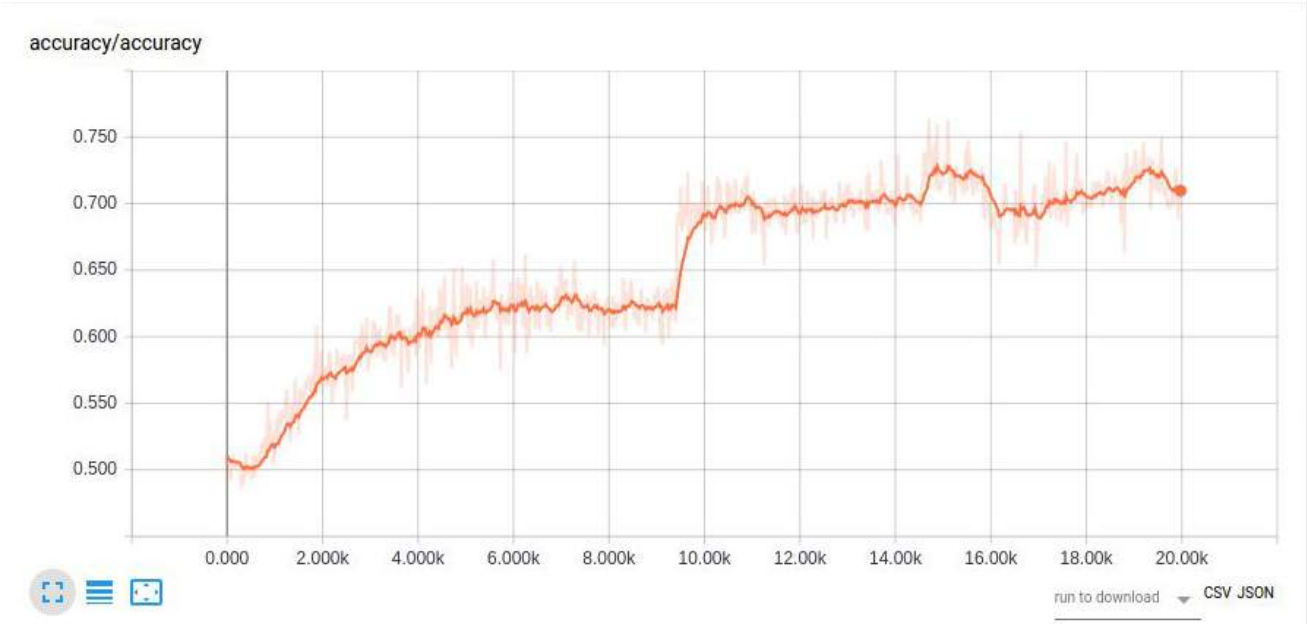
1 / 1,7,2
7 / 7,1,9
4 / 4,7,9
5 / 5,3,8
0 / 0,9,6

2) **L = 5, Sate vector size = 5 (MSE cost function)**

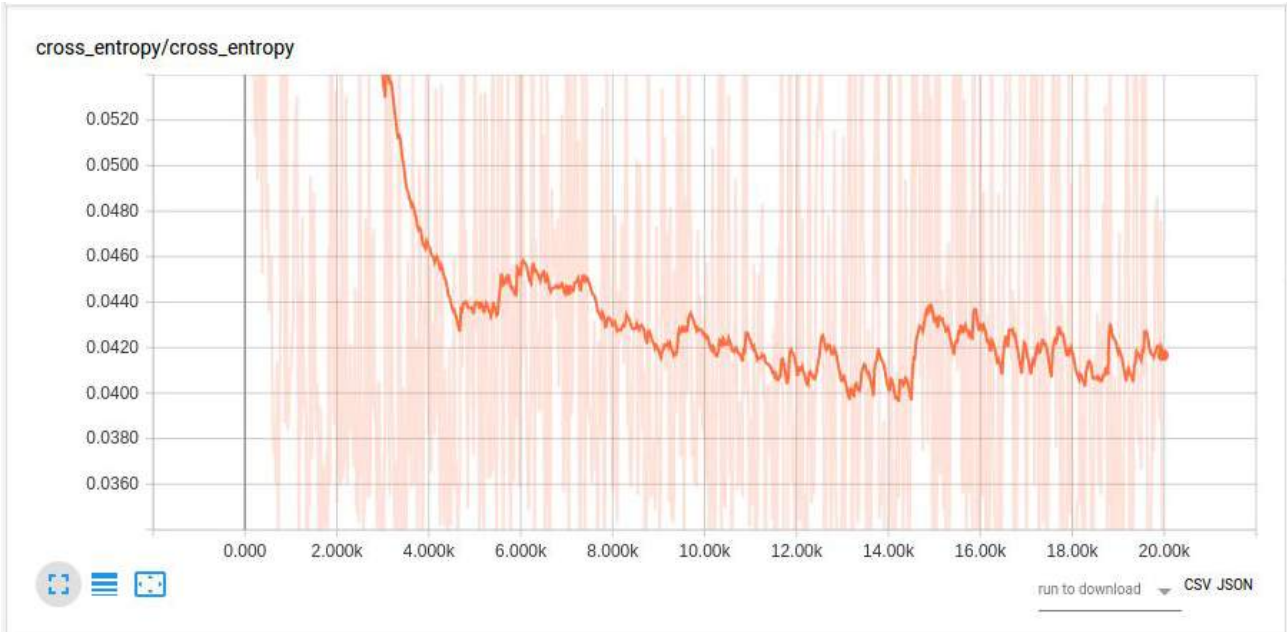
Training Accuracy



Training Loss

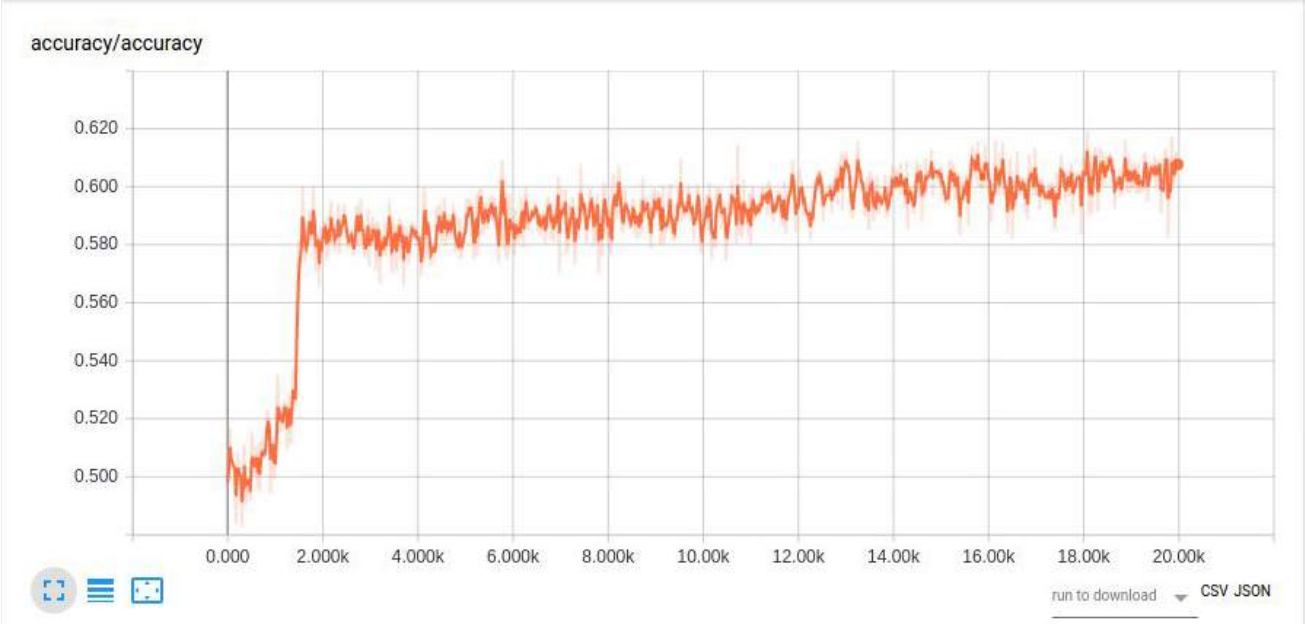


Test Accuracy

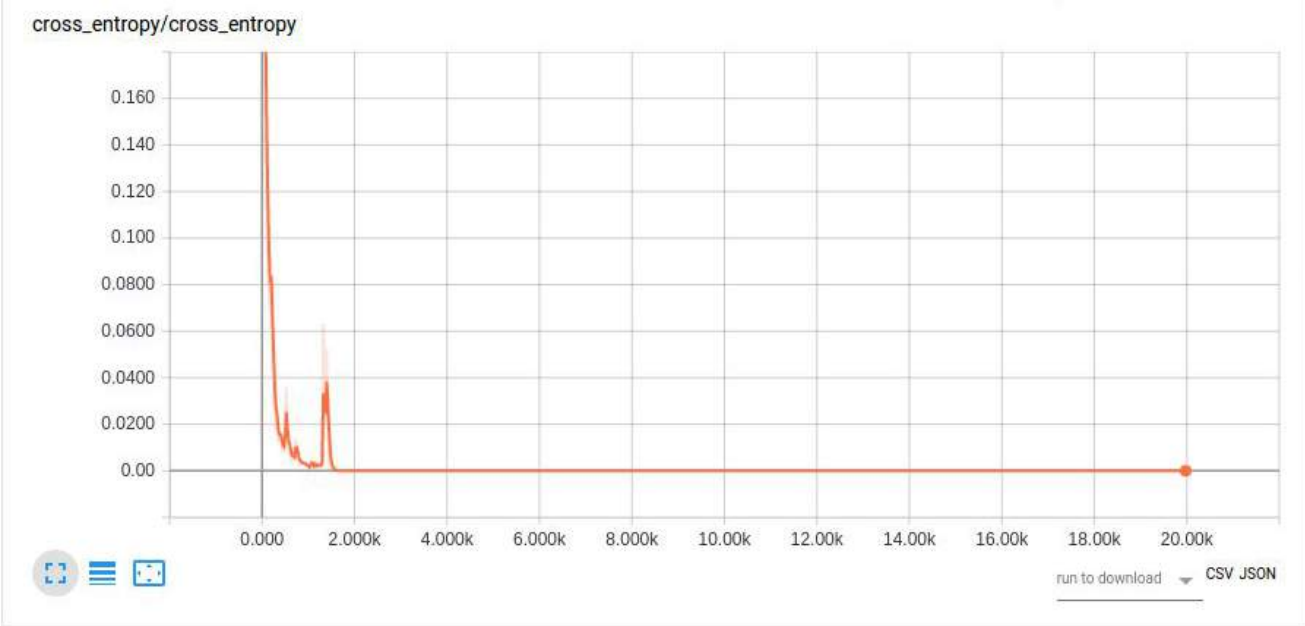


Test Loss

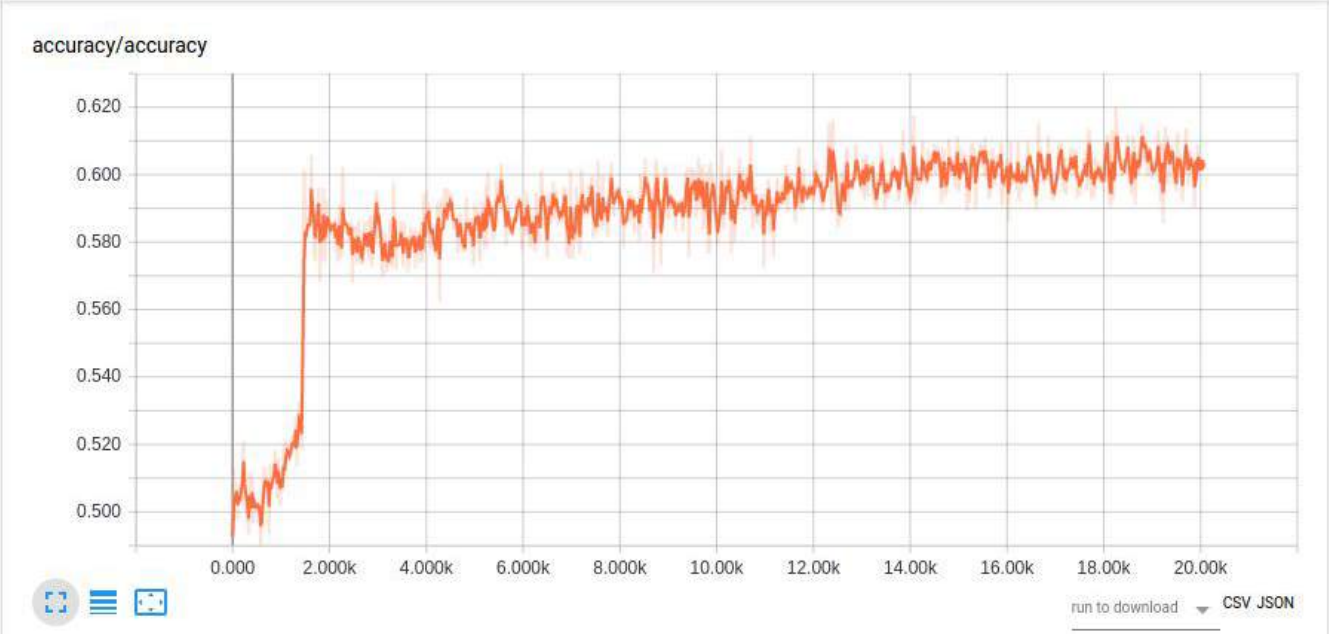
L = 5, Sate vector size = 10 (MSE cost function)



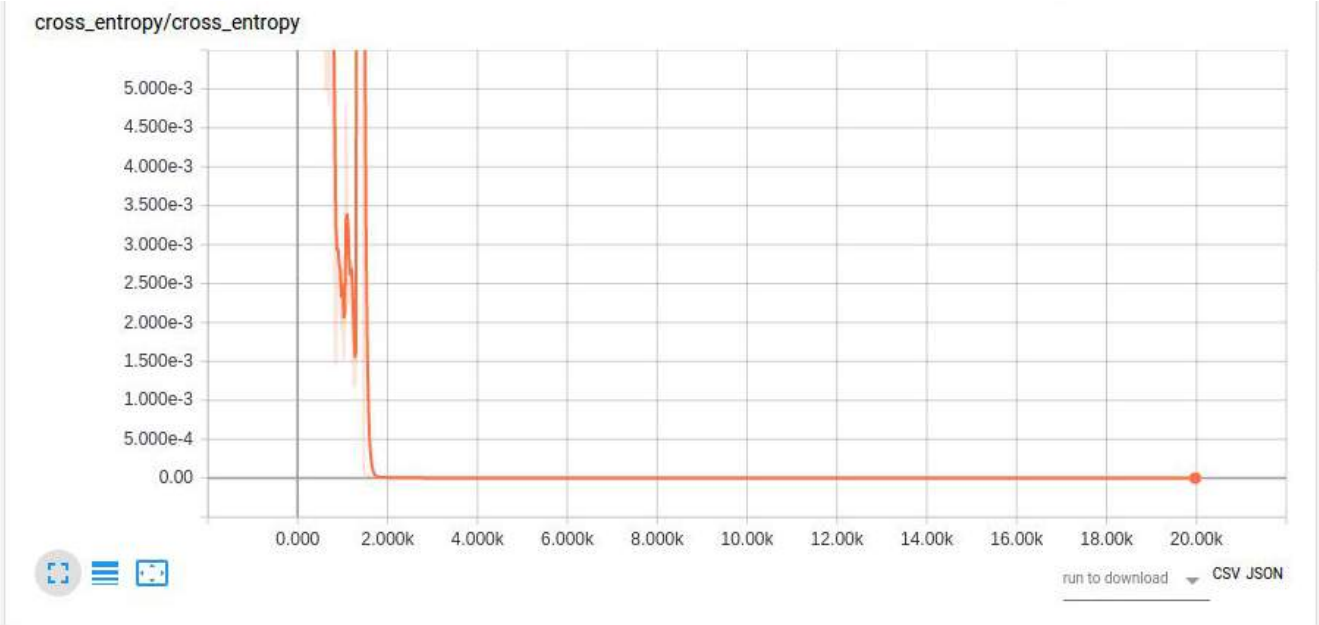
Training Accuracy



Training Loss

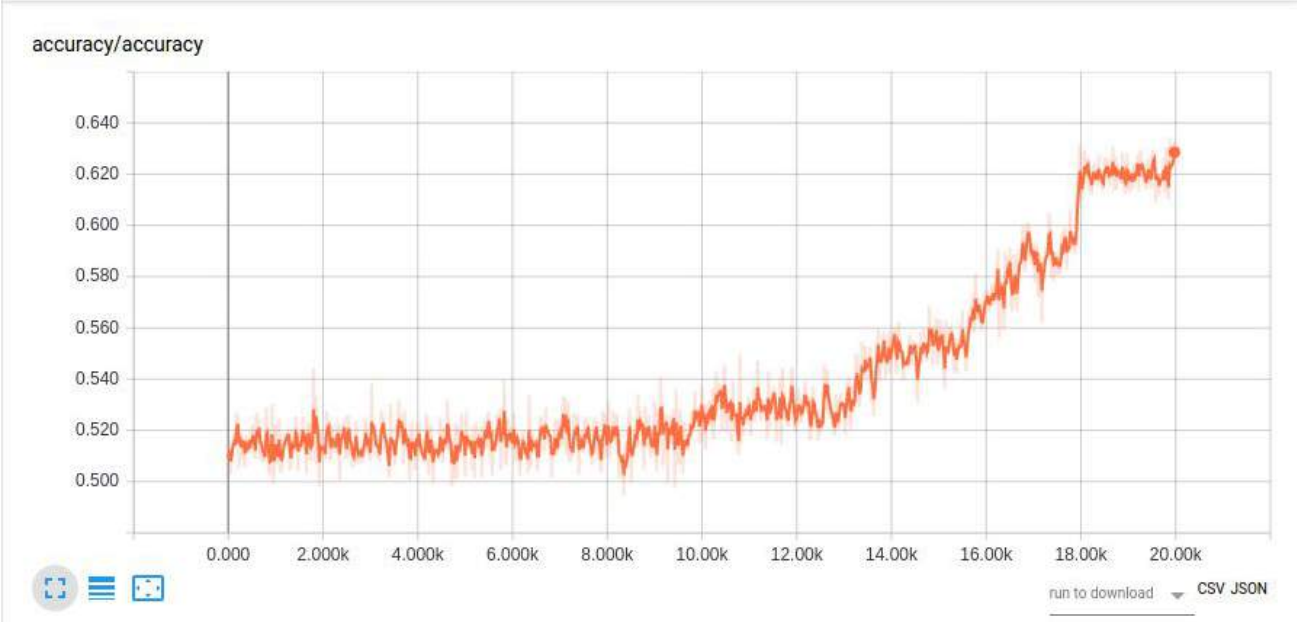


Test Accurcy

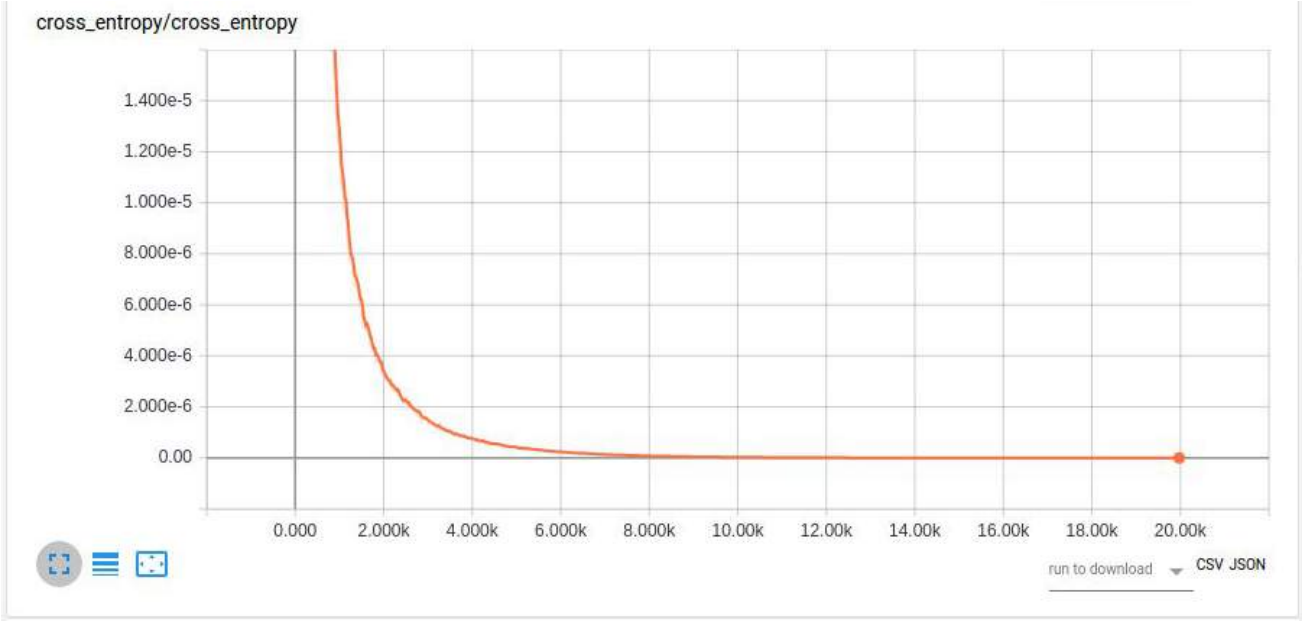


Test Loss

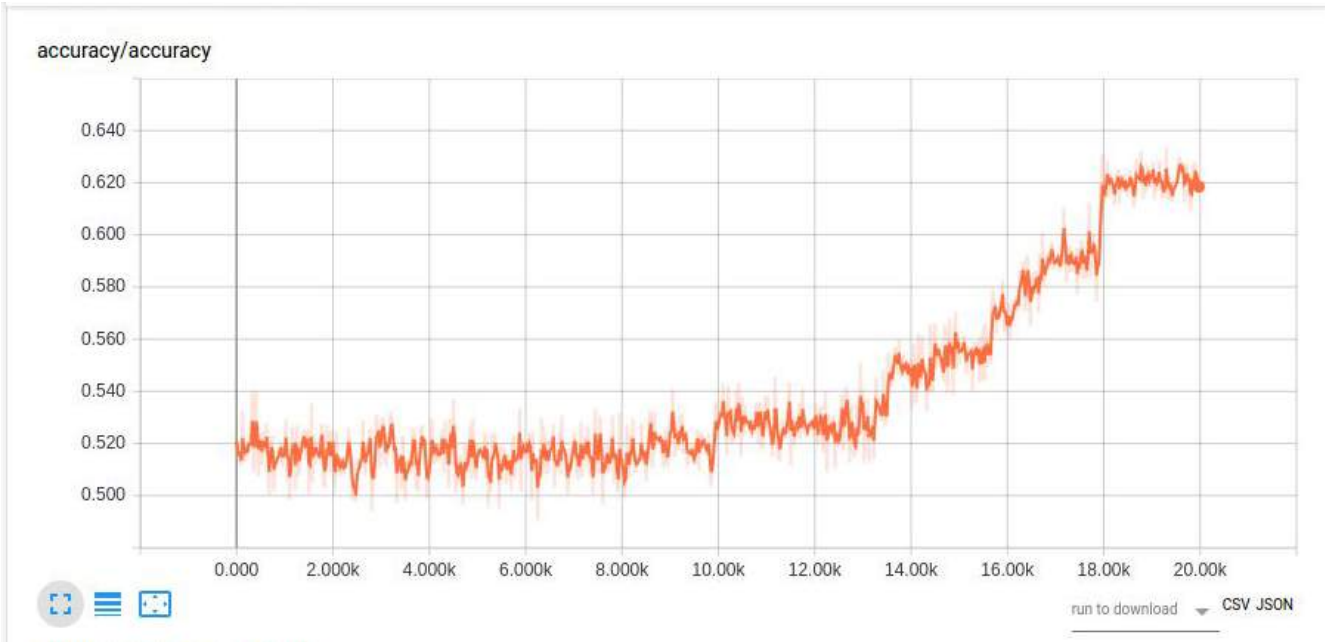
L = 3, Sate vector size = 10 (MSE cost function)



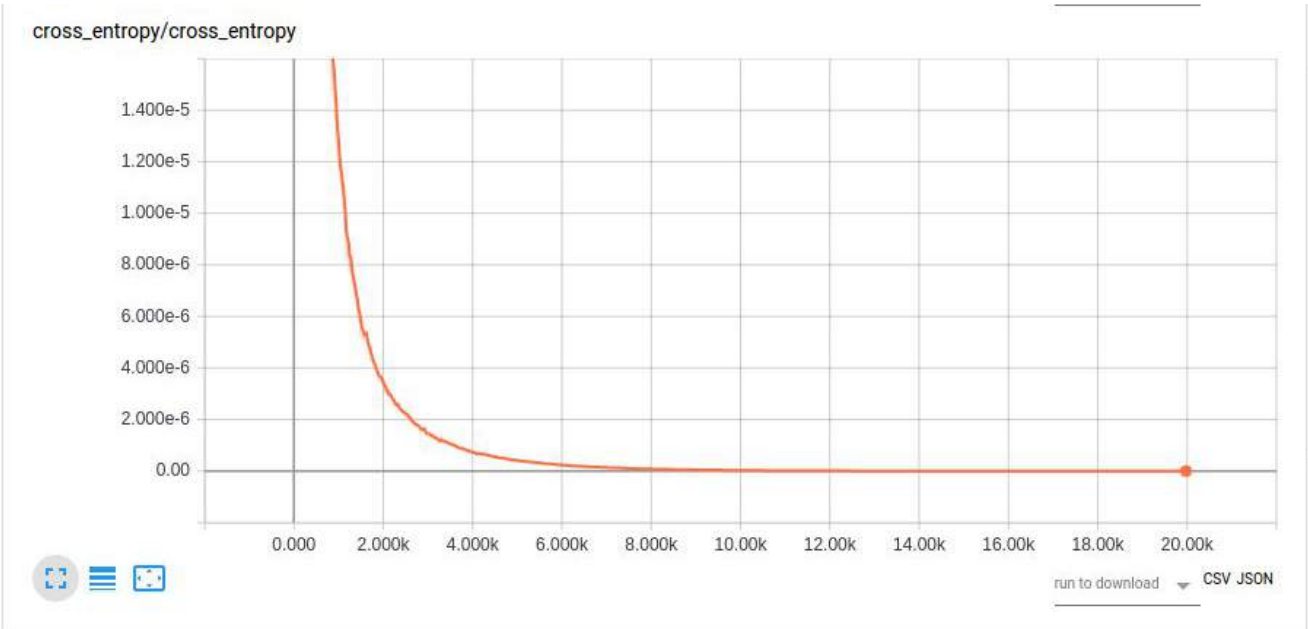
Training Accuracy



Training Loss

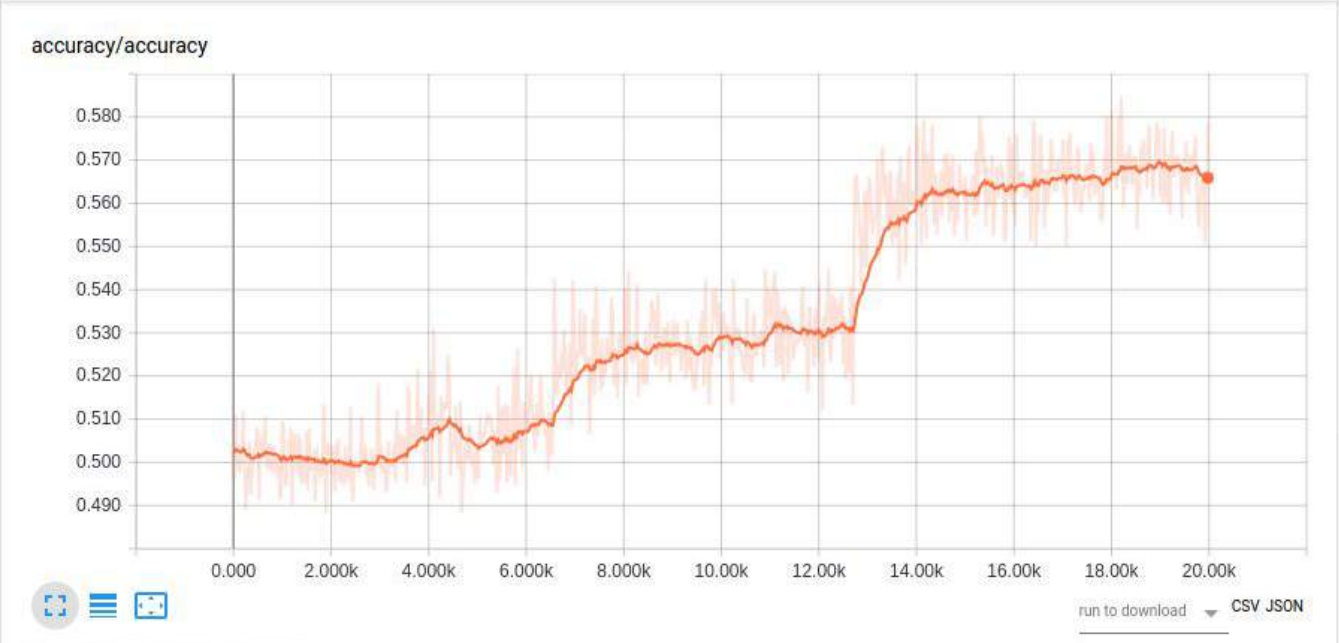


Test Accuracy

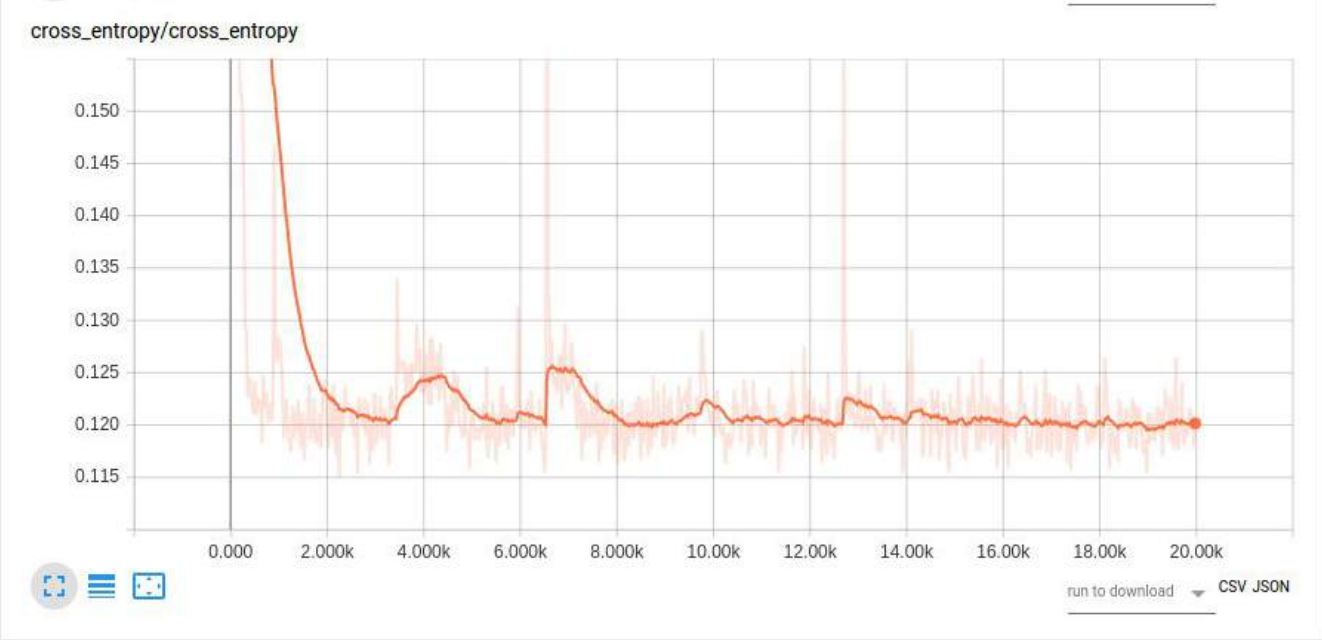


Test Loss

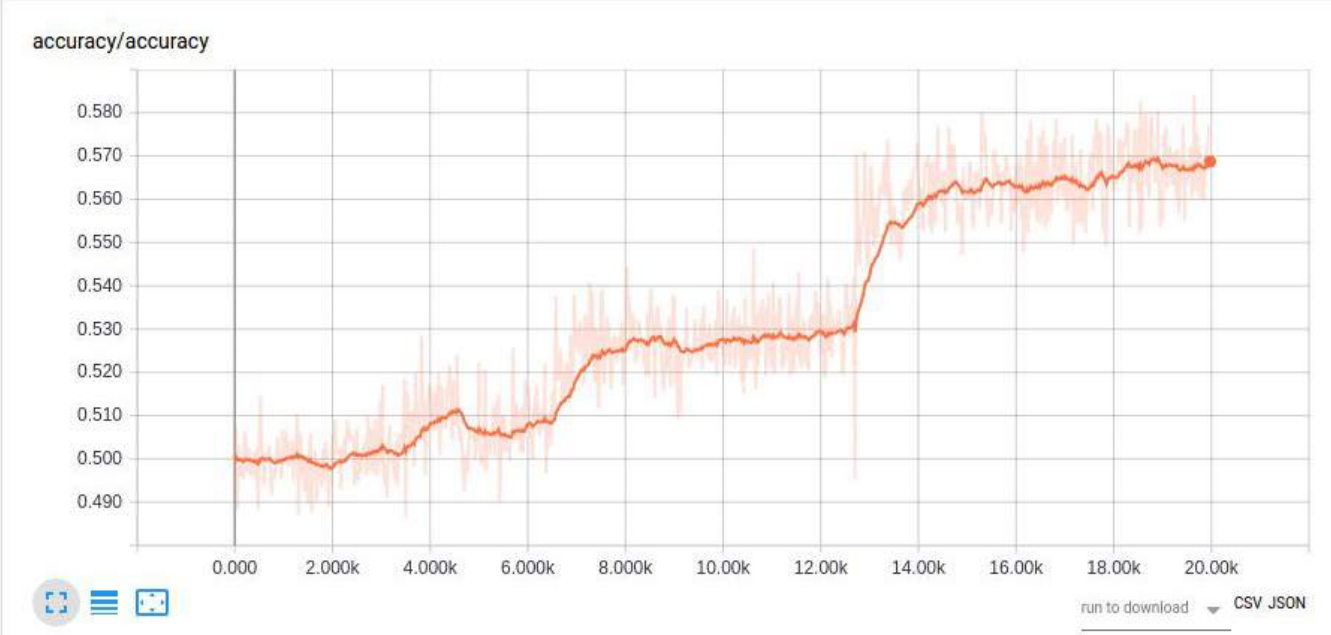
L = 10, Sate vector size = 5 (MSE cost function)



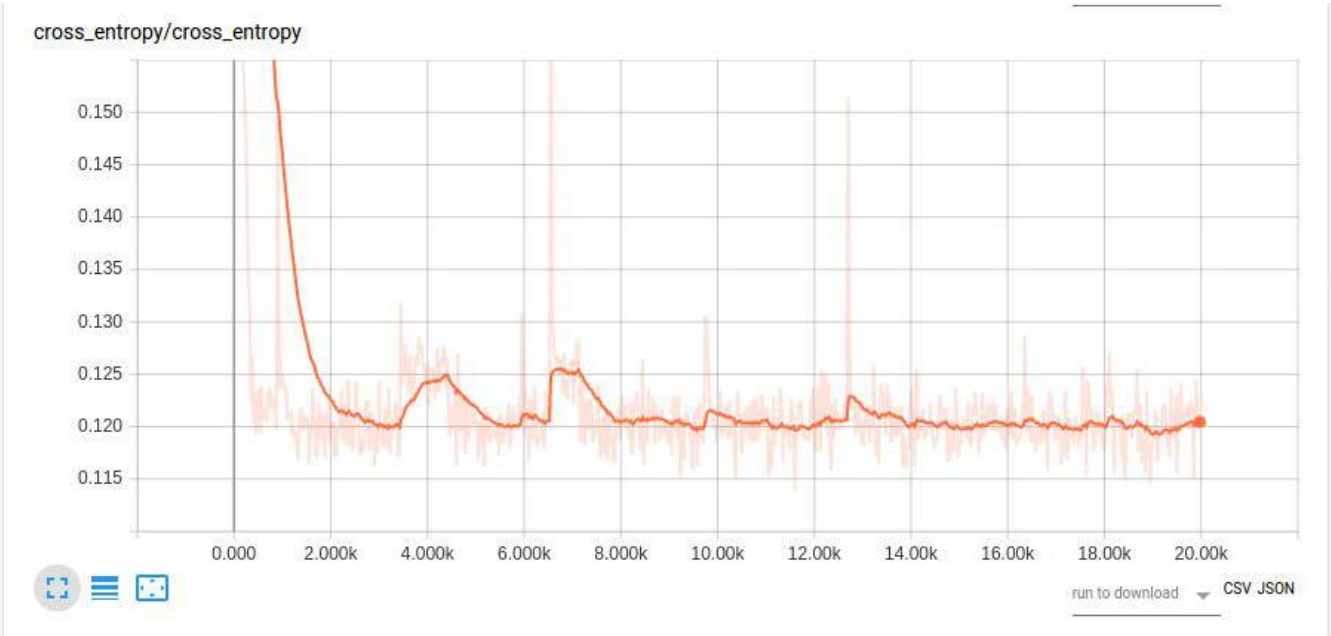
Training Accuracy



Training Loss

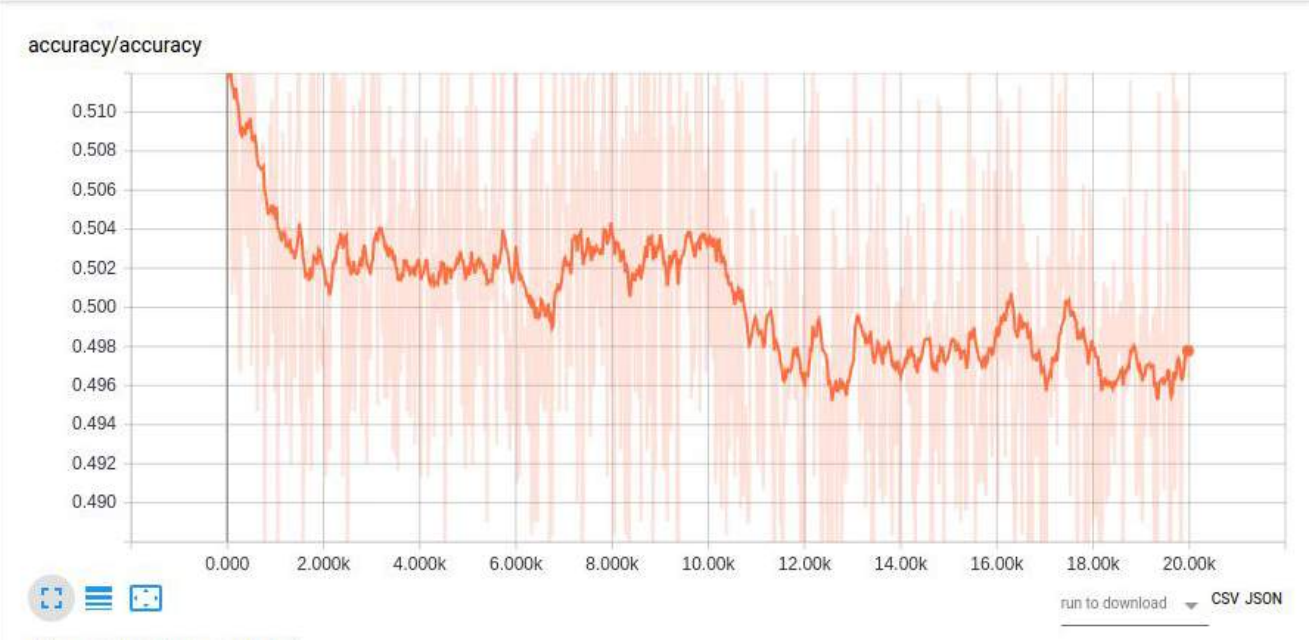


Test Accuracy

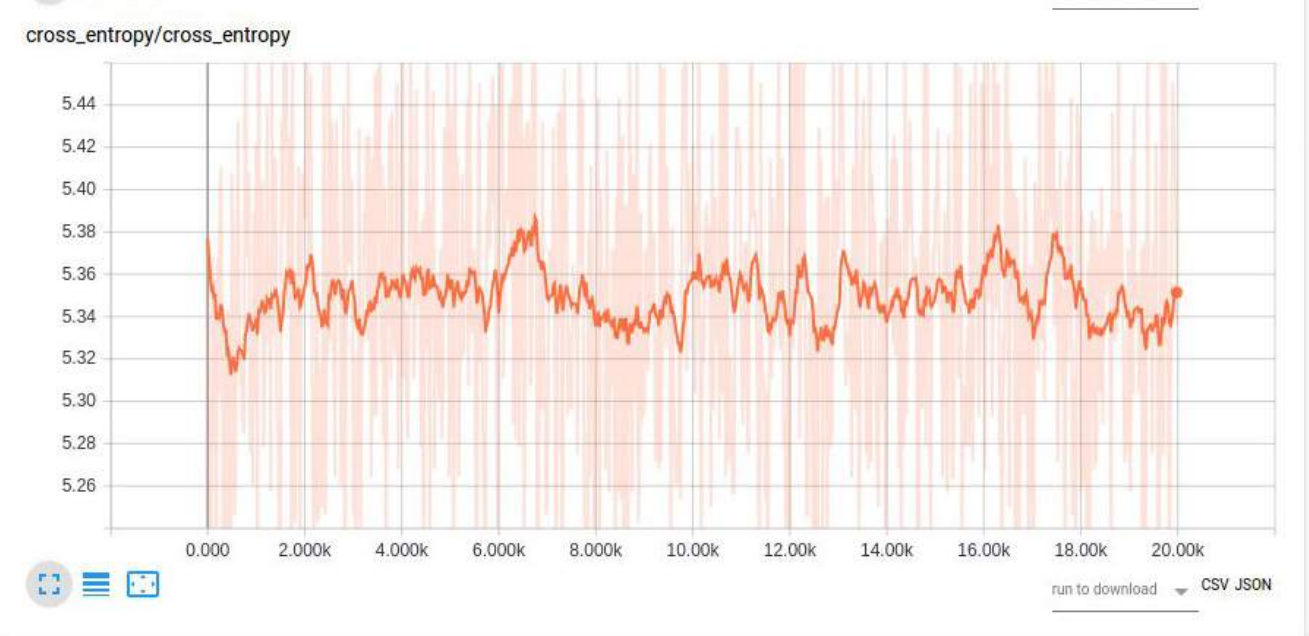


Test Loss

L = 5, Sate vector size = 10 (Cross entropy cost function)



Test Accuracy



Test Loss