TensorBoard Observations

The hyperparameters that I have used for training the CNN model on CIFAR dataset to attain the desired val_accuracy of 0.9 are

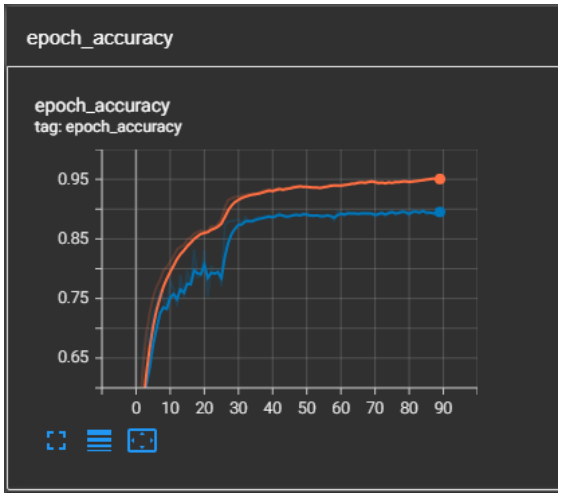
batch_size = 128
l = 6
num_filter = 35
compression = 1.0

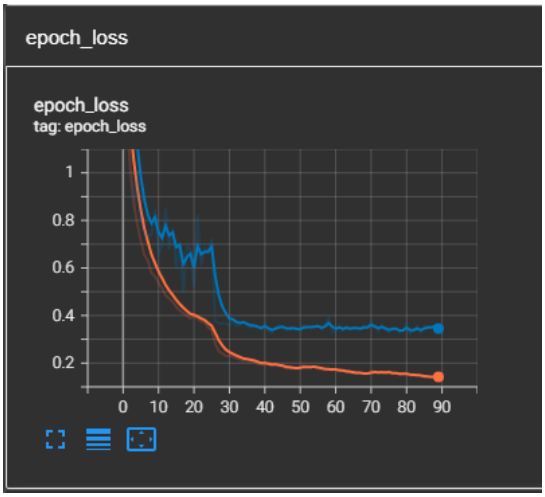
In this model, I coded a custom callback that will stop training when the desired val_accuracy of 0.9 is reached while training. I used the ***ReduceLROnPlateau***, ***ModelCheckpoint***, ***TensorBoard*** and ***stop_at_90*** callbacks to train the CNN model on the CIFAR-10 dataset. I used the ***Adam*** *optimizer* with the default learning rate and '*accuracy*' as the performance metric.

After training the CNN model for 90 epochs, the desired val_accuracy of 0.9002 is attained and the training stops.

Note: Red is the train curve and blue is the validation curve.

1. The train accuracy is 0.9508 and val_accuracy is 0.9002 at the end of 90 epochs.
2. The loss is decreasing after training in the subsequent epochs.





From the epoch_loss graph, we can see that the train loss of 0.1404 is lesser than the val_loss of 0.3325 which indicates that the model is underfitting. Underfitting occurs when the model is unable to accurately model the training data, and hence generates large errors.