

#### **Model 2 Observations:**

### • Epoch Vs Accuracy

In the below image validation accuracy and train accuracy is plotted with respect to each epoch. The best accuracy for validation data set is .8486 which is interestingly constant throughout the training epochs while for train it's .8561 at 3rd epoch. The minimum difference we can see at  $6^{th}$  epoch.



### • Epoch Vs AUC Score

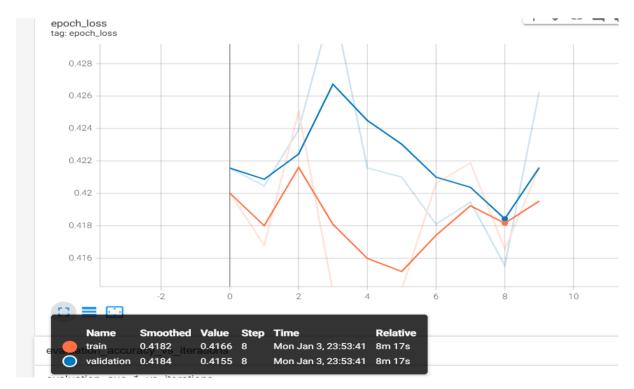
In the below image validation AUC and train AUC is plotted with respect to each epoch. Which we can see in range of .858 to .878 throughout all the epochs for both the train and validation data.

The best AUC for validation data set is .8788 at 9<sup>th</sup> epoch and for train it's .8789 at 9<sup>th</sup> epoch.



#### Epoch Vs Loss

In the below image validation loss and train loss is plotted with respect to each epoch. Which we can see for both train and validation data set loss value ranges between .4 to .43 which is quite good given such high AUC scores. At 9<sup>th</sup> epoch validation loss is .4155 and train loss is .4166



\*Note: We can see for the all the above plots the minimum difference between train and validation is occurred at 9<sup>th</sup> epoch and 3<sup>rd</sup> epoch. But weights calculated at 9<sup>th</sup> should be used for this model as a proper fit for lowest loss.