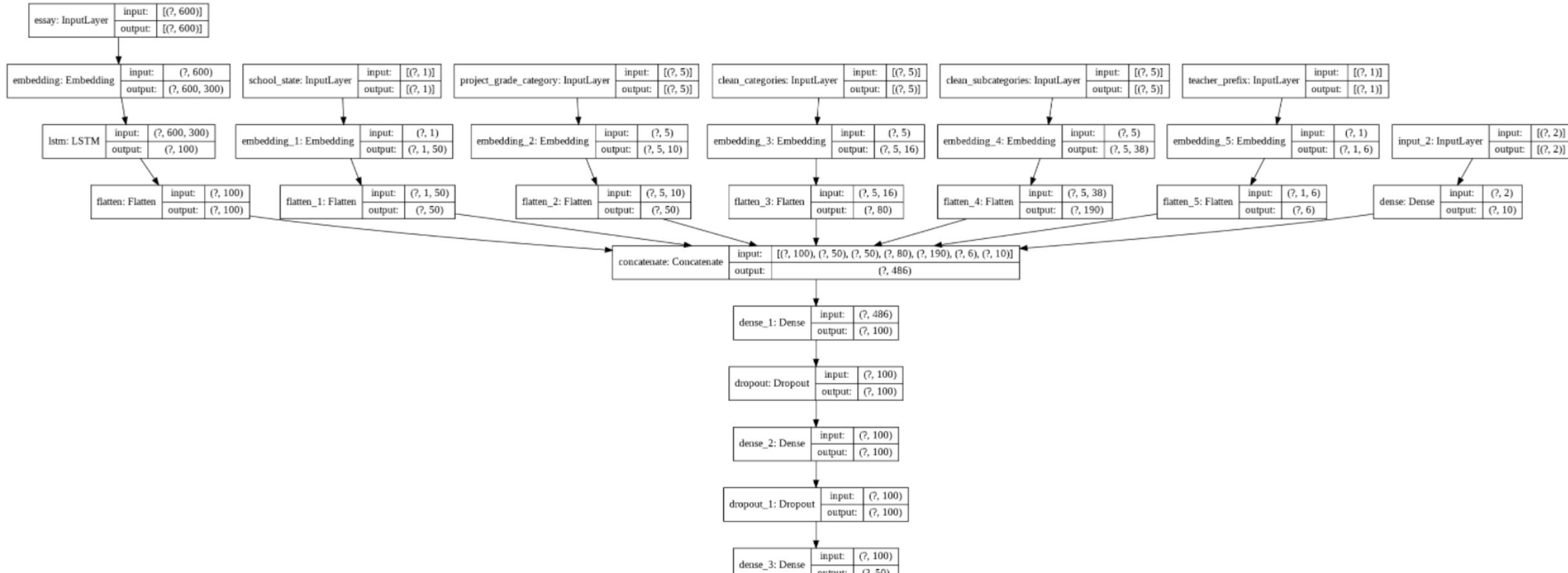


# LSDM ON DONAR CHOOSE

[ ]



## ETA ,AUC TRAIN AND AUC TEST FOR MODEL 1



Epoch 1/5

1/2500 [.....] - ETA: 0s - loss: 0.6791WARNING:tensorflow:From /usr/local/lib/python3.6/dist-packages/tensorflow/python/ops/summary\_ops\_v2.py:1277: stop (fr

Instructions for updating:

use `tf.profiler.experimental.stop` instead.

2500/2500 [=====] - ETA: 0s - loss: 0.4362 roc-auc\_train: 0.694 - roc-auc\_test: 0.6881

2500/2500 [=====] - 2561s 1s/step - loss: 0.4362 - val\_loss: 0.4210

Epoch 2/5

2500/2500 [=====] - ETA: 0s - loss: 0.4030 roc-auc\_train: 0.7209 - roc-auc\_test: 0.7137

2500/2500 [=====] - 2517s 1s/step - loss: 0.4030 - val\_loss: 0.4140

Epoch 3/5

2500/2500 [=====] - ETA: 0s - loss: 0.3930 roc-auc\_train: 0.7369 - roc-auc\_test: 0.728

2500/2500 [=====] - 2556s 1s/step - loss: 0.3930 - val\_loss: 0.4026

Epoch 4/5

2500/2500 [=====] - ETA: 0s - loss: 0.3861 roc-auc\_train: 0.7471 - roc-auc\_test: 0.7352

2500/2500 [=====] - 2580s 1s/step - loss: 0.3861 - val\_loss: 0.4239

Epoch 5/5

2500/2500 [=====] - ETA: 0s - loss: 0.3811 roc-auc\_train: 0.7526 - roc-auc\_test: 0.7334

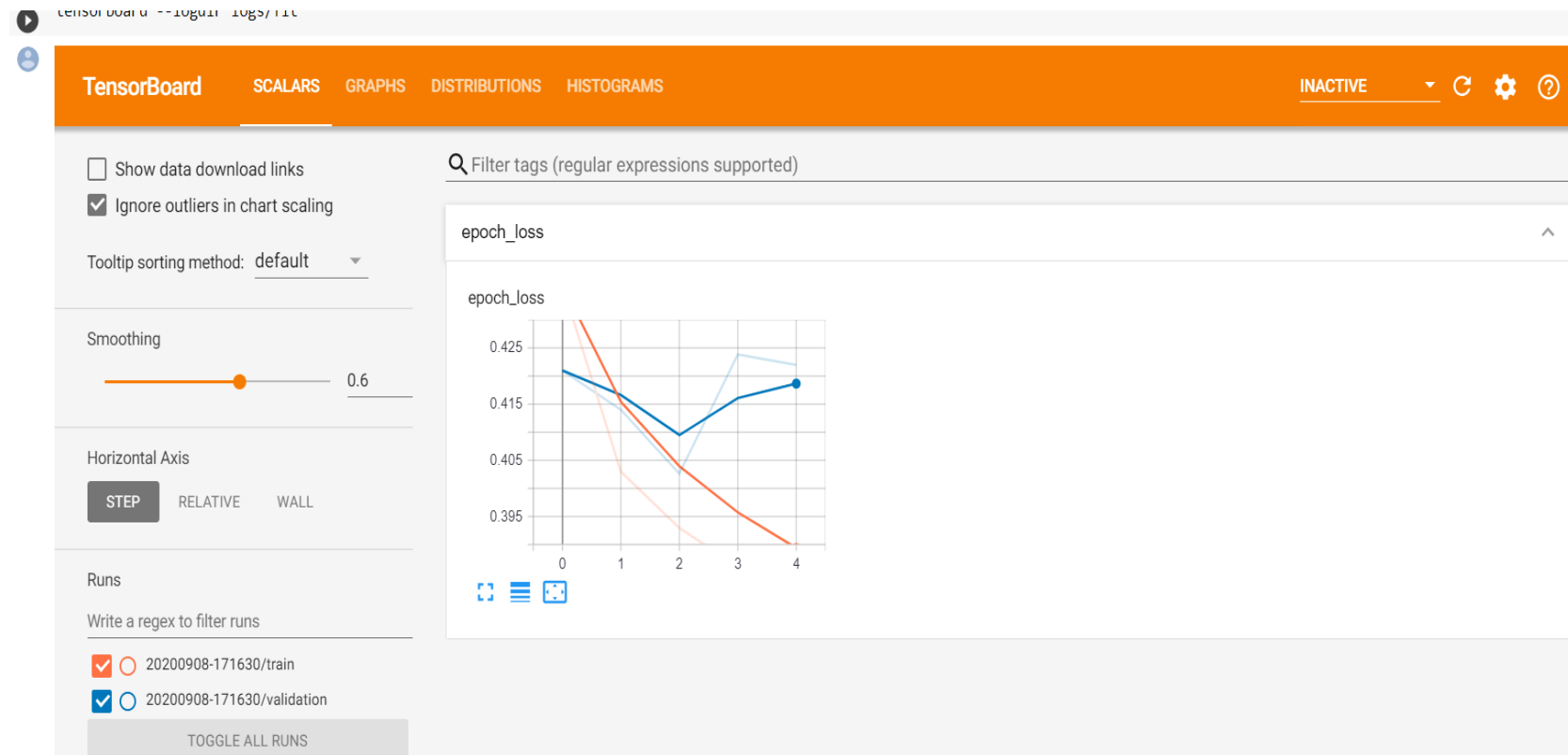
2500/2500 [=====] - 2570s 1s/step - loss: 0.3811 - val\_loss: 0.4220

<tensorflow.python.keras.callbacks.History at 0x7f40241cd1d0>

ETA loss decreasing from 0.4362 in 1<sup>st</sup> epoch to 0.3811 in 5<sup>th</sup> epoch

AUC train increasing from 0.694 in 1<sup>st</sup> epoch to 0.765 at 5<sup>th</sup> Epoch

AUC test increasing from 0.6881 in 1<sup>st</sup> epoch to 0.7334 at 5<sup>th</sup> epoch



---

# OBSERVATION FOR MODEL -1

1. After every epoch loss is decreasing and AUC score is increasing
2. From epoch 4 to 5 roc\_auc\_train is increased but roc\_auc\_test slightly decreased.
3. Highest AUC\_train is - 0.7526 and AUC\_test is -0.7334

# MODEL 2

## ETA ,AUC TRAIN AND AUC TEST FOR MODEL 2

```
Epoch 1/5
2500/2500 [=====] - ETA: 0s - loss: 0.4305 roc-auc_train: 0.7038 - roc-auc_test: 0.6986
2500/2500 [=====] - 2534s 1s/step - loss: 0.4305 - val_loss: 0.4026
Epoch 2/5
2500/2500 [=====] - ETA: 0s - loss: 0.3964 roc-auc_train: 0.7327 - roc-auc_test: 0.7223
2500/2500 [=====] - 2536s 1s/step - loss: 0.3964 - val_loss: 0.3882
Epoch 3/5
2500/2500 [=====] - ETA: 0s - loss: 0.3849 roc-auc_train: 0.7473 - roc-auc_test: 0.7323
2500/2500 [=====] - 2571s 1s/step - loss: 0.3849 - val_loss: 0.4001
Epoch 4/5
2500/2500 [=====] - ETA: 0s - loss: 0.3771 roc-auc_train: 0.7574 - roc-auc_test: 0.7367
2500/2500 [=====] - 2616s 1s/step - loss: 0.3771 - val_loss: 0.3991
Epoch 5/5
2500/2500 [=====] - ETA: 0s - loss: 0.3728 roc-auc_train: 0.7661 - roc-auc_test: 0.739
2500/2500 [=====] - 2629s 1s/step - loss: 0.3728 - val_loss: 0.3897
<tensorflow.python.keras.callbacks.History at 0x7f401d4bf898>
```

ETA loss decreasing from 0.4305 in 1<sup>st</sup> epoch to 0.3728 in 5<sup>th</sup> epoch

AUC train increasing from 0.7038 in 1<sup>st</sup> epoch to 0.7661 at 5<sup>th</sup> Epoch

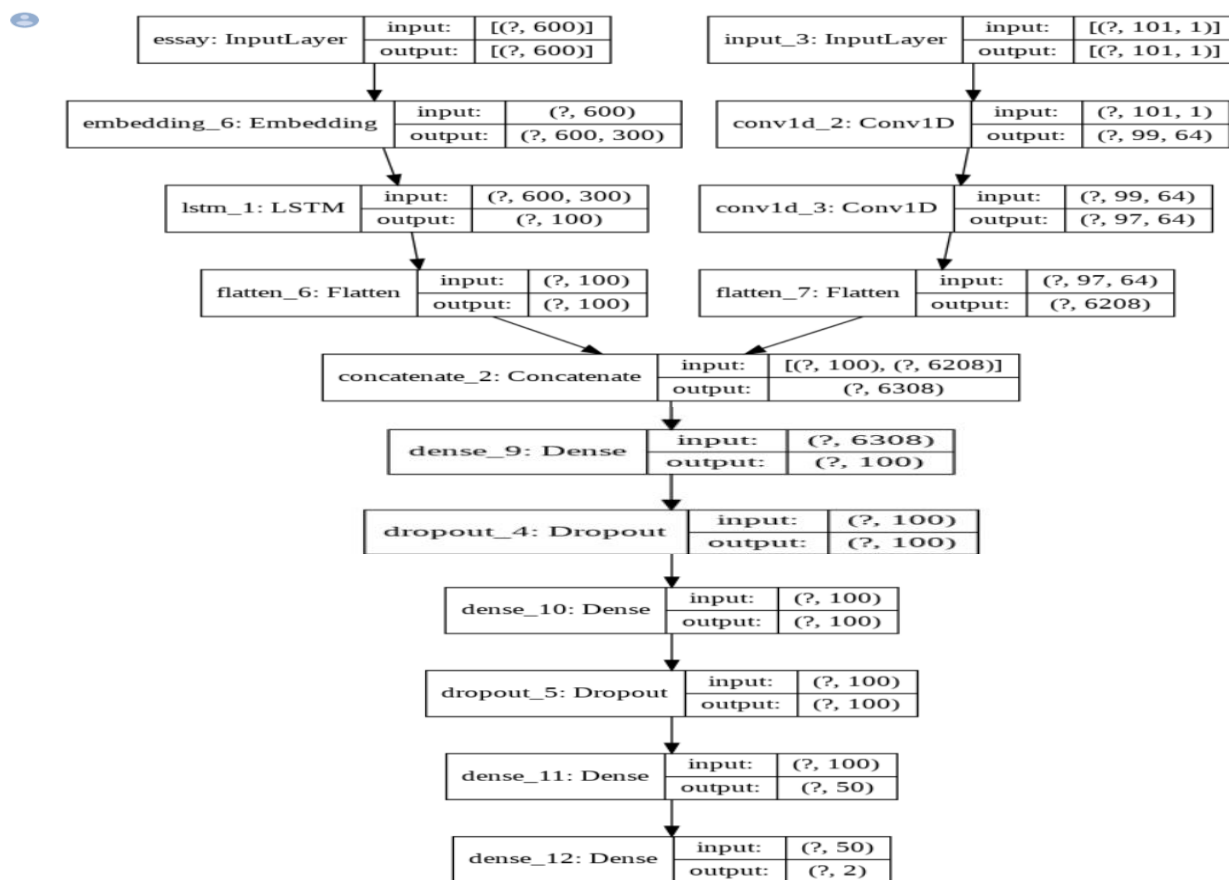
AUC test increasing from 0.6986 in 1<sup>st</sup> epoch to 0.739 at 5<sup>th</sup> epoch

## OBSERVATIONS FOR MODEL - 2

1. On every epoch loss is decreasing.
2. roc\_auc\_train and roc\_auc\_test is slightly better than model-1
3. highest auc\_train = 0.7661 and auc\_test = 0.739

# Model-3

multi\_input\_and\_output\_model.png



## ETA ,AUC TRAIN AND AUC TEST FOR MODEL 3

```
Epoch 1/5
2500/2500 [=====] - ETA: 0s - loss: 0.4281 roc-auc_train: 0.6983 - roc-auc_test: 0.6914
2500/2500 [=====] - 2645s 1s/step - loss: 0.4281 - val_loss: 0.4323
Epoch 2/5
2500/2500 [=====] - ETA: 0s - loss: 0.3953 roc-auc_train: 0.7348 - roc-auc_test: 0.7224
2500/2500 [=====] - 2631s 1s/step - loss: 0.3953 - val_loss: 0.4074
Epoch 3/5
2500/2500 [=====] - ETA: 0s - loss: 0.3861 roc-auc_train: 0.7497 - roc-auc_test: 0.7339
2500/2500 [=====] - 2611s 1s/step - loss: 0.3861 - val_loss: 0.4041
Epoch 4/5
2500/2500 [=====] - ETA: 0s - loss: 0.3804 roc-auc_train: 0.7608 - roc-auc_test: 0.7407
2500/2500 [=====] - 2611s 1s/step - loss: 0.3804 - val_loss: 0.3916
Epoch 5/5
2500/2500 [=====] - ETA: 0s - loss: 0.3760 roc-auc_train: 0.7675 - roc-auc_test: 0.7454
2500/2500 [=====] - 2692s 1s/step - loss: 0.3760 - val_loss: 0.3990
<tensorflow.python.keras.callbacks.History at 0x7f4027c06278>
```

ETA loss decreasing from 0.4281 in 1<sup>st</sup> epoch to 0.3760 in 5<sup>th</sup> epoch

AUC train increasing from 0.6983 in 1<sup>st</sup> epoch to 0.7675 at 5<sup>th</sup> Epoch

AUC test increasing from 0.6914 in 1<sup>st</sup> epoch to 0.7454 at 5<sup>th</sup> epoch





TensorBoard

SCALARS

GRAPHS

DISTRIBUTIONS

HISTOGRAMS

INACTIVE



☐ Show data download links

☒ Ignore outliers in chart scaling

Tooltip sorting method: default

Smoothing

0.6

Horizontal Axis

STEP

RELATIVE

WALL

Runs

Write a regex to filter runs

☒ 20200909-005430/train

☒ 20200909-005430/validation

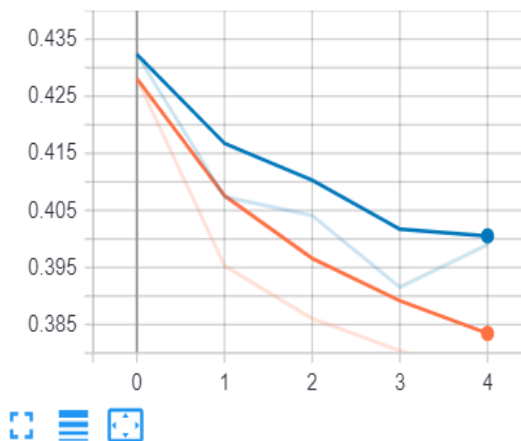
TOGGLE ALL RUNS

logs/fit

Filter tags (regular expressions supported)

epoch\_loss

epoch\_loss



---

# OBSERVATIONS FOR MODEL 3

1. After every epoch loss is decreasing and AUC score is increasing
2. roc\_auc\_train and roc\_auc\_test is slightly better than model-1 and model-2
3. Test\_auc score highest value is 74.54% .