

**Project Development Phase**  
**Model Performance Test**

Date	21 November 2022
Team ID	PNT2022TMID42609
Project Name	Developing a Flight Delay PredictionModel using Machine Learning
Maximum Marks	10 Marks

**Model Performance Testing:**

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
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1.	Metrics	<b>Classification Model:</b> Accuracy Score & Classification Report	<pre> Epoch 1/10 38/38 [=====] - 4s 55ms/step - loss: 0.1276 Epoch 2/10 38/38 [=====] - 2s 53ms/step - loss: 0.1203 Epoch 3/10 38/38 [=====] - 2s 53ms/step - loss: 0.1201 Epoch 4/10 38/38 [=====] - 2s 52ms/step - loss: 0.1202 Epoch 5/10 38/38 [=====] - 2s 52ms/step - loss: 0.1200 Epoch 6/10 38/38 [=====] - 2s 53ms/step - loss: 0.1203 Epoch 7/10 38/38 [=====] - 2s 52ms/step - loss: 0.1199 Epoch 8/10 38/38 [=====] - 2s 53ms/step - loss: 0.1197 Epoch 9/10 38/38 [=====] - 2s 51ms/step - loss: 0.1196 Epoch 10/10 38/38 [=====] - 2s 52ms/step - loss: 0.1196 71/71 [=====] - 1s 5ms/step - loss: 0.1191 Accuracy : 98.80870334804058 WARNING:absl:Found untraced functions such as lstm_cell_layer_call_fn, lstm_cell_layer_call_and_return_conditional_losses while saving (showing 2 of 2) 71/71 [=====] - 1s 5ms/step  [18] predicted = model.predict(test_x) print(model.evaluate(test_x, test_y))  71/71 [=====] - 0s 4ms/step 71/71 [=====] - 0s 5ms/step - loss: 0.1191 0.11912966519594193 </pre>
2.	Tune the Model	Hyper parameter Tuning ,Validation Method	<pre> [12] from sklearn.model_selection import train_test_split train_x, test_x, train_y, test_y = train_test_split(df.drop('ARR_DEL15', axis=1), df['ARR_DEL15'], test_size=0.2, random_state=42)  [13] train_x.shape  (8984, 14)  [14] test_x.shape  (2247, 14)  [15] test_x.shape  (2247, 14) </pre>