

## Project Development Phase Model Performance Test

Date	15 November 2022
Team ID	PNT2022TMID21805
Project Name	Project – Crude Oil Price Prediction
Maximum Marks	10 Marks

### Model Performance Testing:

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

S.No.	Parameter	Values	Screenshot
1.	Model Summary	-	<pre> Model: "sequential" Layer (type)                Output Shape                Param # ----- lstm (LSTM)                  (None, 10, 50)              10400 lstm_1 (LSTM)                 (None, 10, 50)              20200 lstm_2 (LSTM)                 (None, 50)                  20200 dense (Dense)                 (None, 1)                   51 ----- Total params: 50,851 Trainable params: 50,851 Non-trainable params: 0 </pre>
2.	Accuracy	<p>Training Accuracy – 96.3%</p> <p>Validation Accuracy – 90.6%</p>	<pre> Epoch 8/10 400/400 [=====] - 31s 60ms/step - loss: 6.1302 - accuracy: 0.9588 - val_loss: 6.3348 - val_accuracy: 0.9035 Epoch 9/10 400/400 [=====] - 30s 73ms/step - loss: 6.1344 - accuracy: 0.9595 - val_loss: 6.3335 - val_accuracy: 0.9032 Epoch 10/10 400/400 [=====] - 31s 60ms/step - loss: 6.1281 - accuracy: 0.9603 - val_loss: 6.3093 - val_accuracy: 0.9068 </pre>

### 1. Model Summary:

Model: "sequential"

Layer (type)	Output Shape	Param #
lstm (LSTM)	(None, 10, 50)	10400
lstm_1 (LSTM)	(None, 10, 50)	20200
lstm_2 (LSTM)	(None, 50)	20200
dense (Dense)	(None, 1)	51
<p>=====  Total params: 50,851  Trainable params: 50,851  Non-trainable params: 0</p>		

### 2. Accuracy:

Epoch 8/10

480/480 [=====] - 33s 68ms/step - loss: 0.1362 - accuracy: 0.9580 - val\_loss: 0.3744 - val\_accuracy: 0.8859

Epoch 9/10

480/480 [=====] - 34s 71ms/step - loss: 0.1344 - accuracy: 0.9585 - val\_loss: 0.3191 - val\_accuracy: 0.9027

Epoch 10/10

480/480 [=====] - 33s 69ms/step - loss: 0.1201 - accuracy: 0.9633 - val\_loss: 0.3093 - val\_accuracy: 0.9068