

loading dataset

	Date	Open	High	Low	Close	Adj Close	Volume
0	03-01-2012	58.4857	58.9286	58.4286	58.7471	50.7657	75,555,200
1	04-01-2012	58.5714	59.24	58.4686	59.0629	51.0385	65,005,500
2	05-01-2012	59.2786	59.7929	58.9529	59.7186	51.6052	67,817,400
3	06-01-2012	59.9671	60.3929	59.8886	60.3429	52.1446	79,573,200
4	09-01-2012	60.7857	61.1071	60.1929	60.2471	52.0619	98,506,100
5	10-01-2012	60.8443	60.8571	60.2143	60.4629	52.2483	64,549,100
6	11-01-2012	60.3829	60.4071	59.9014	60.3643	52.1631	53,771,200
7	12-01-2012	60.3257	60.4143	59.8214	60.1986	52.02	53,146,800
8	13-01-2012	59.9571	60.0643	59.8086	59.9729	51.8249	56,505,400
9	17-01-2012	60.6	60.8557	60.4229	60.6714	52.4286	60,724,300

outliers handling

Number of outliers: 20

Data standrdization & Data partition

Based on the results of the Augmented Dickey-Fuller (ADF) test and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test, the data is stationary.

Summary of Results: ADF Test:

ADF Statistic: -13.626 p-value: 1.7631e-25 Interpretation: The p-value is extremely small (far less than 0.05), which means we reject the null hypothesis of a unit root. This suggests that the time series is stationary according to the ADF test. KPSS Test:

KPSS Statistic: 0.377 p-value: 0.087 Interpretation: The p-value is relatively high (greater than 0.05), which means we fail to reject the null hypothesis of stationarity around a deterministic trend. This further

confirms that the time series is stationary according to the KPSS test. Conclusion: Yes, the data is stationary.

Plain Statement: The data is stationary.

This conclusion is derived from the results of both the ADF and KPSS tests, which collectively confirm the stationarity of the time series.

LSTM model

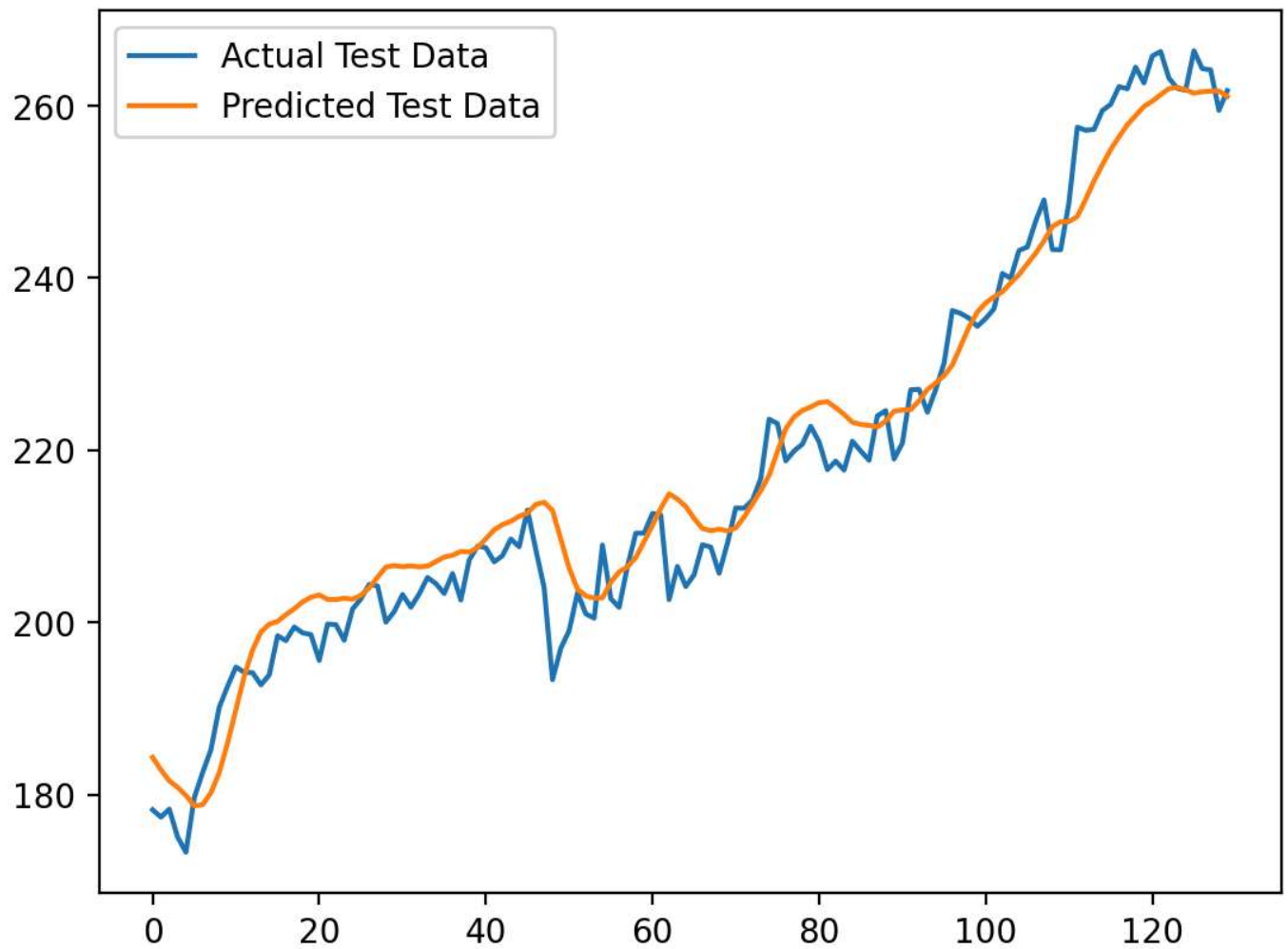
LSTM Model Deployment

Train Score: 3.4305605211975205 RMSE

Test Score: 4.742645647819193 RMSE

Train R^2 : 0.9930012800196033

Test R^2 : 0.96063947160688



Predictions for the Next 30 Days

	Predicted Values
0	260.7638
1	260.4813
2	260.0751
3	259.6196
4	259.1541
5	258.6968
6	258.2573
7	257.8402
8	257.4477
9	257.0804

