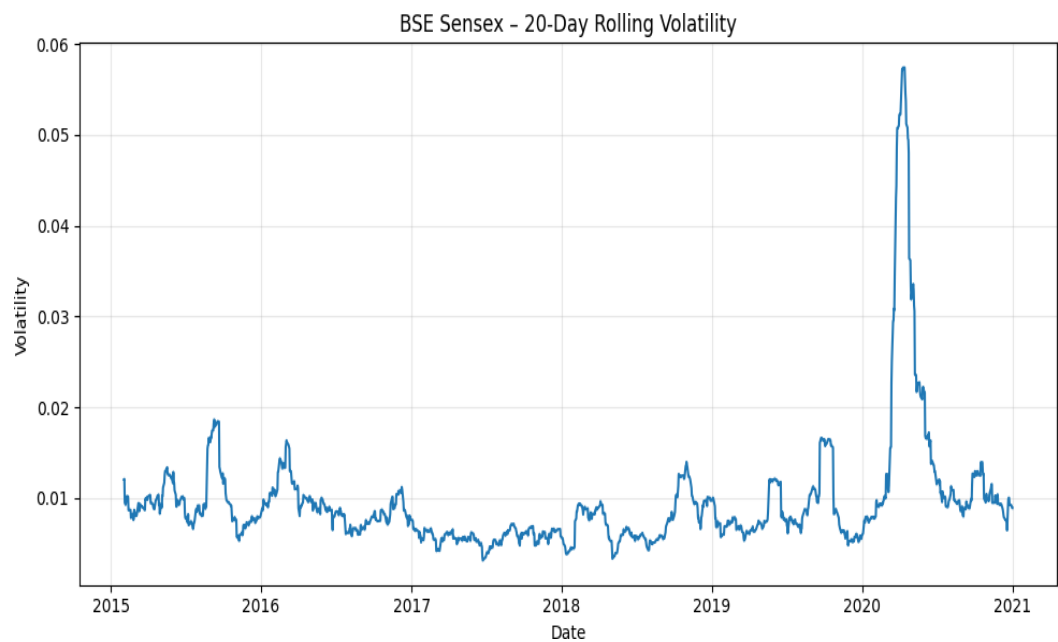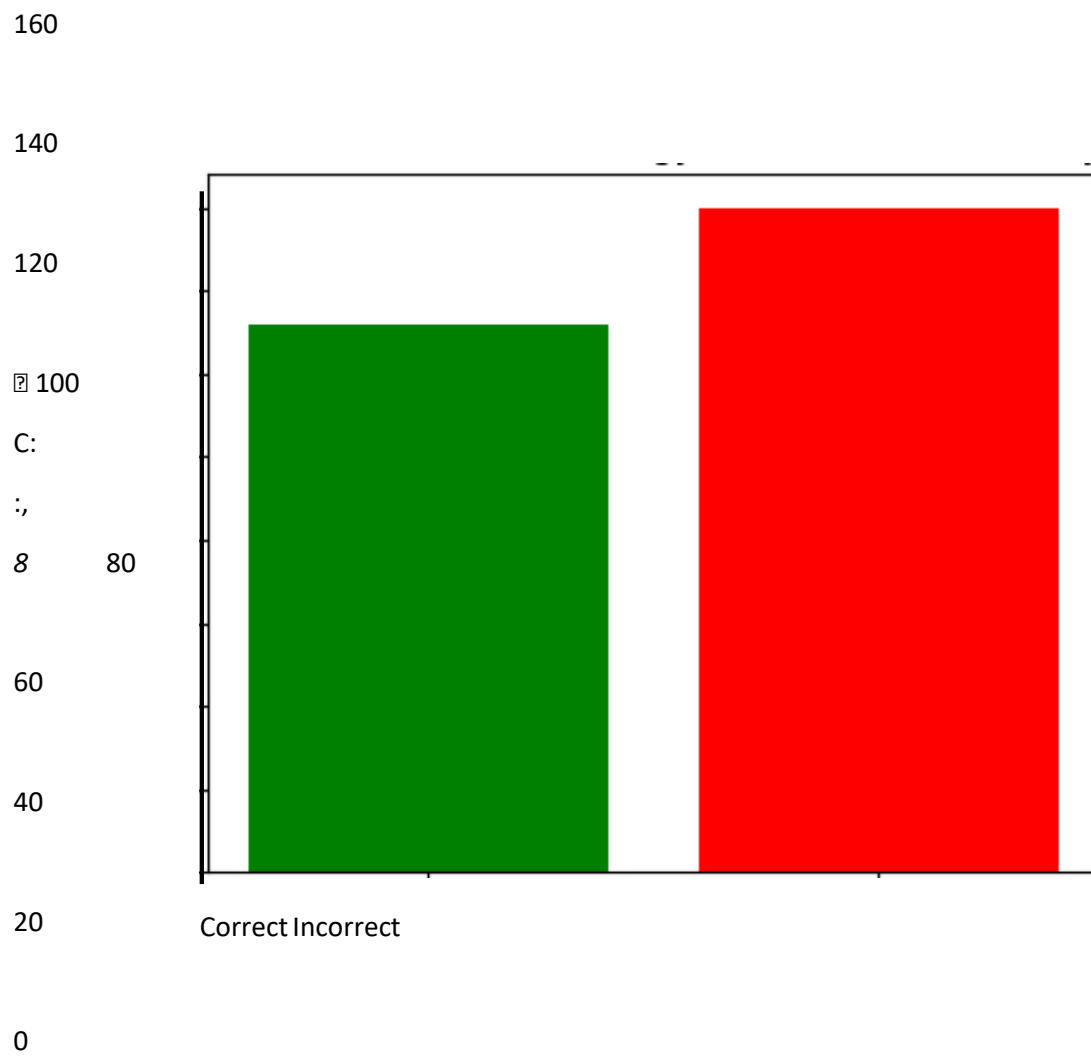**Figure 1.** Model Output Visualization

This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
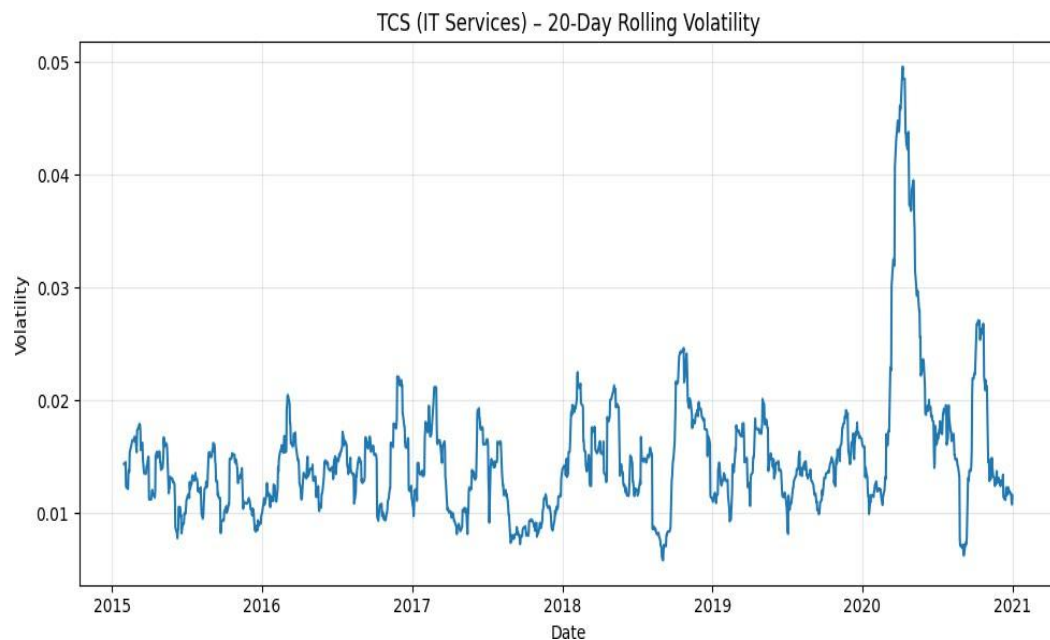

BSE Sensex – 20-Day Rolling Volatility

Figure 2. Model Output Visualization

This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Reliance Industries (Energy) - Prediction Accuracy

160

140

120

100

C:

:,

8   80
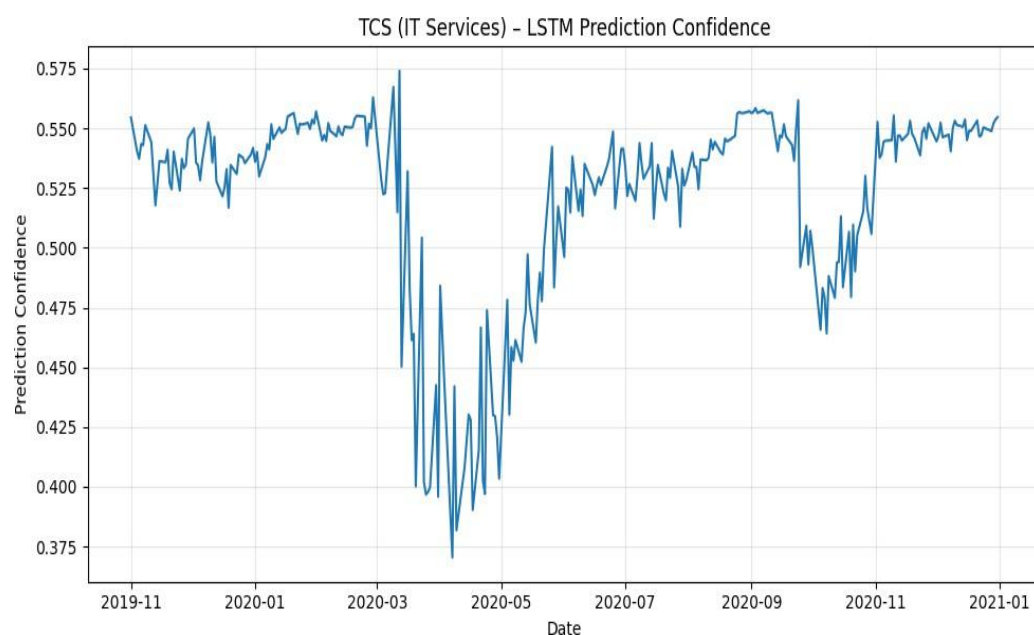
60

40

20   Correct Incorrect

0

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

TCS (IT Services) – 20-Day Rolling Volatility

Figure 4. Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
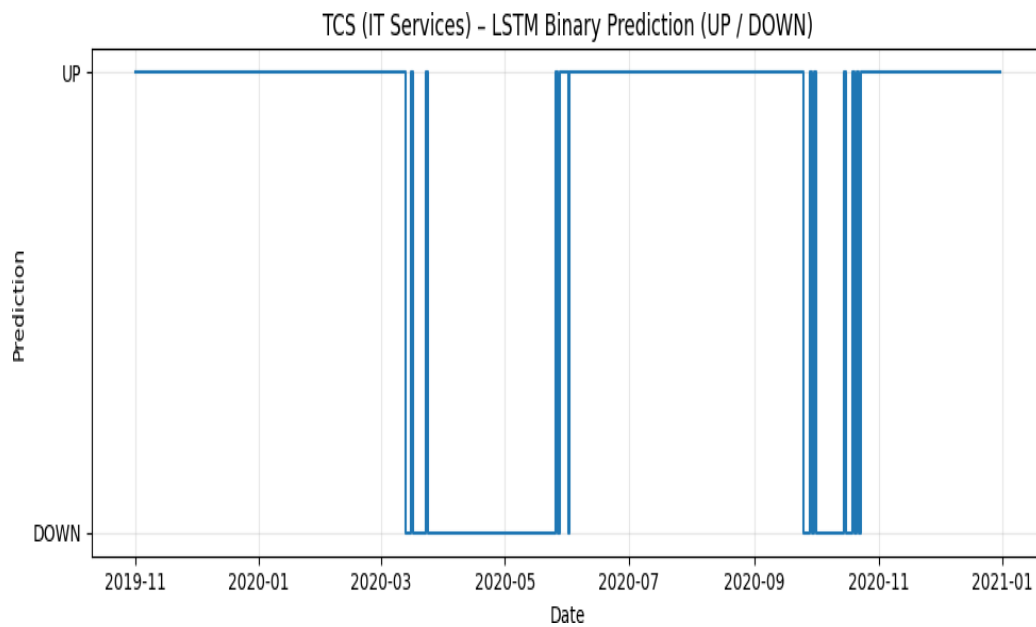

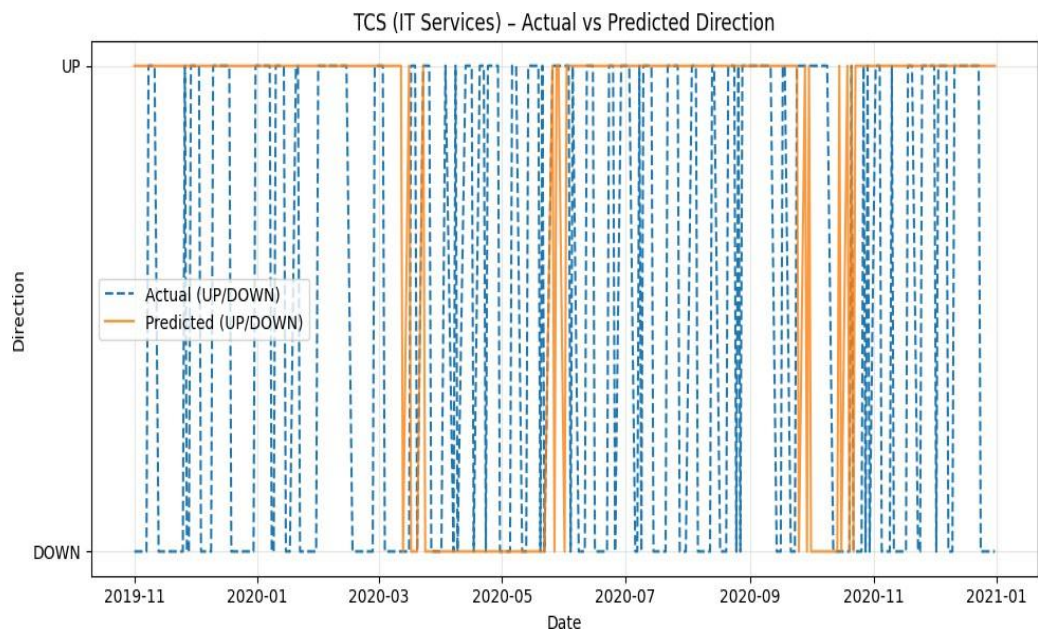TCS (IT Services) – LSTM Prediction Confidence

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

TCS (IT Services) – LSTM Binary Prediction (UP / DOWN)

- **Figure 6.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
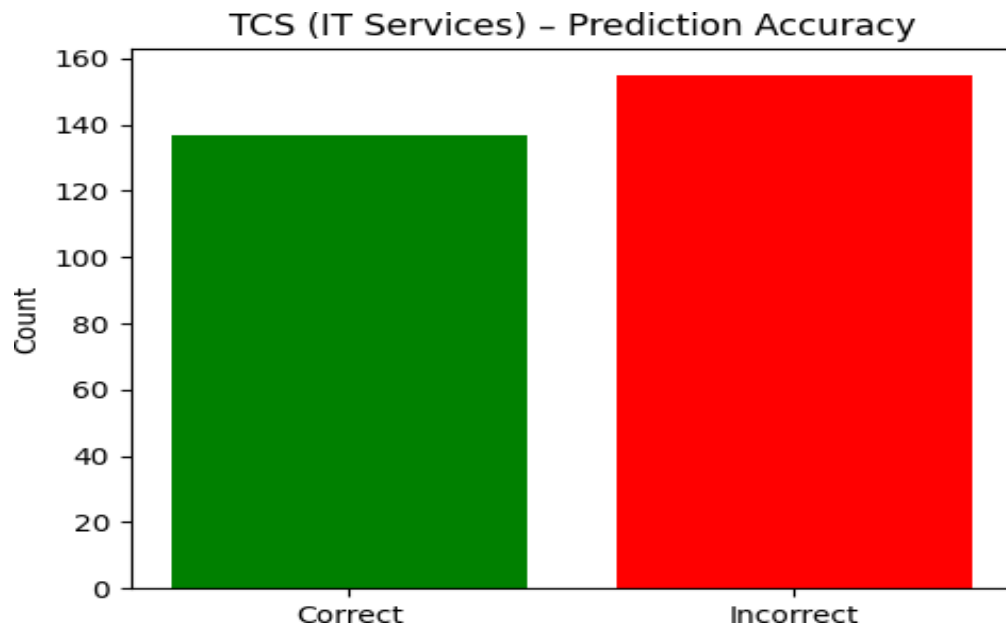
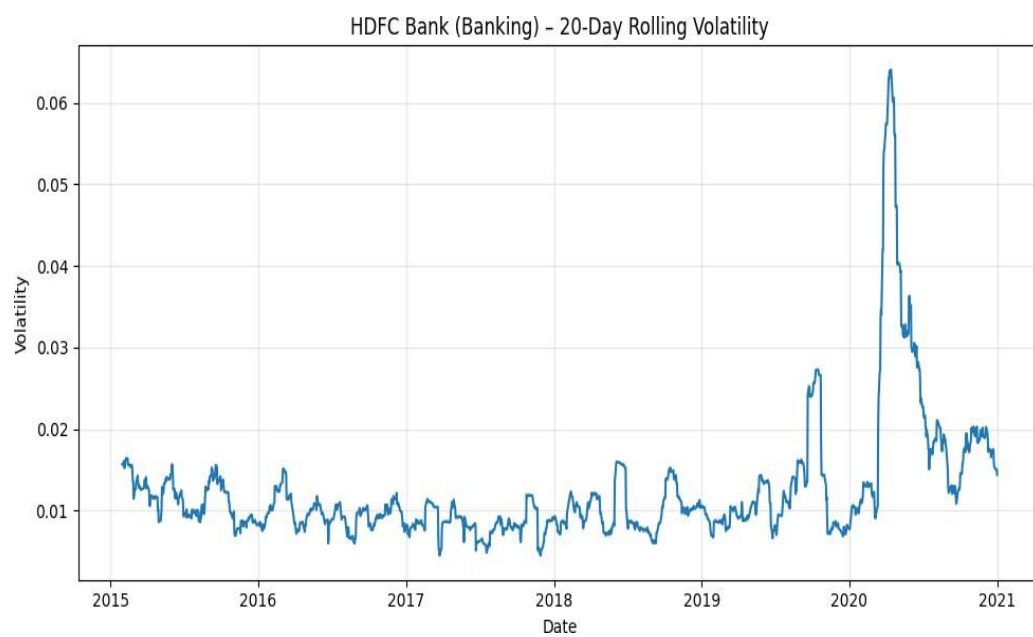TCS (IT Services) – Actual vs Predicted Direction

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
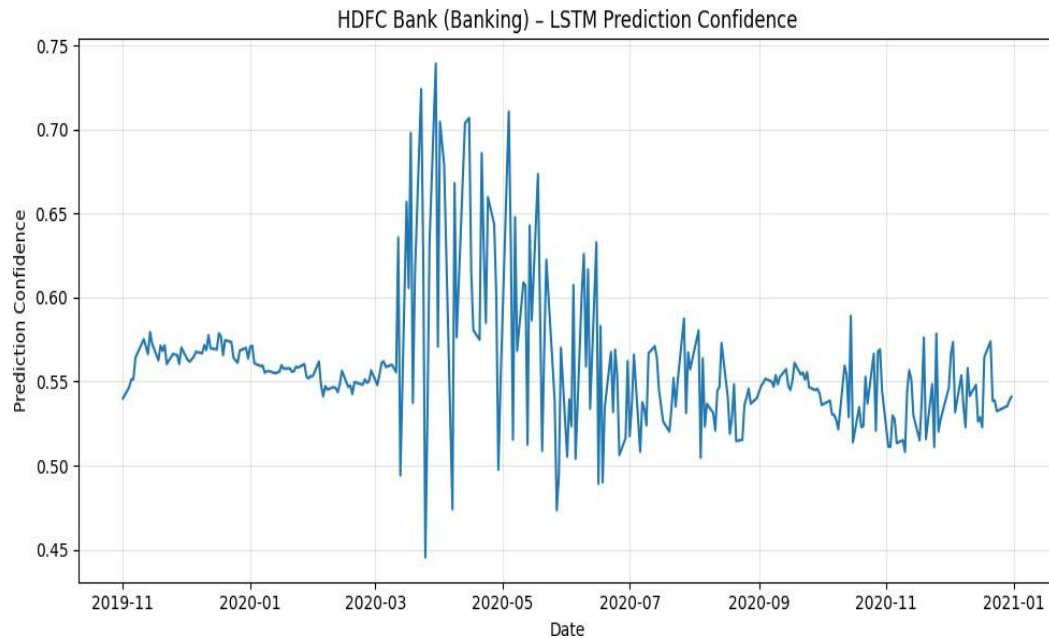

TCS (IT Services) – Prediction Accuracy

- **Figure 8.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

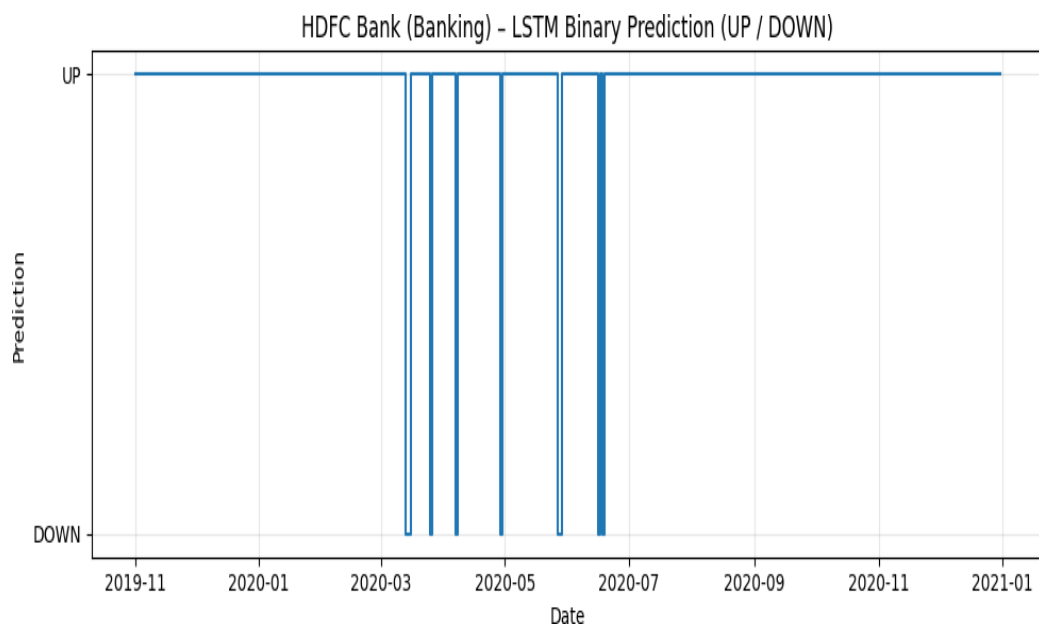HDFC Bank (Banking) – 20-Day Rolling Volatility

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

HDFC Bank (Banking) – LSTM Prediction Confidence

- **Figure 10.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
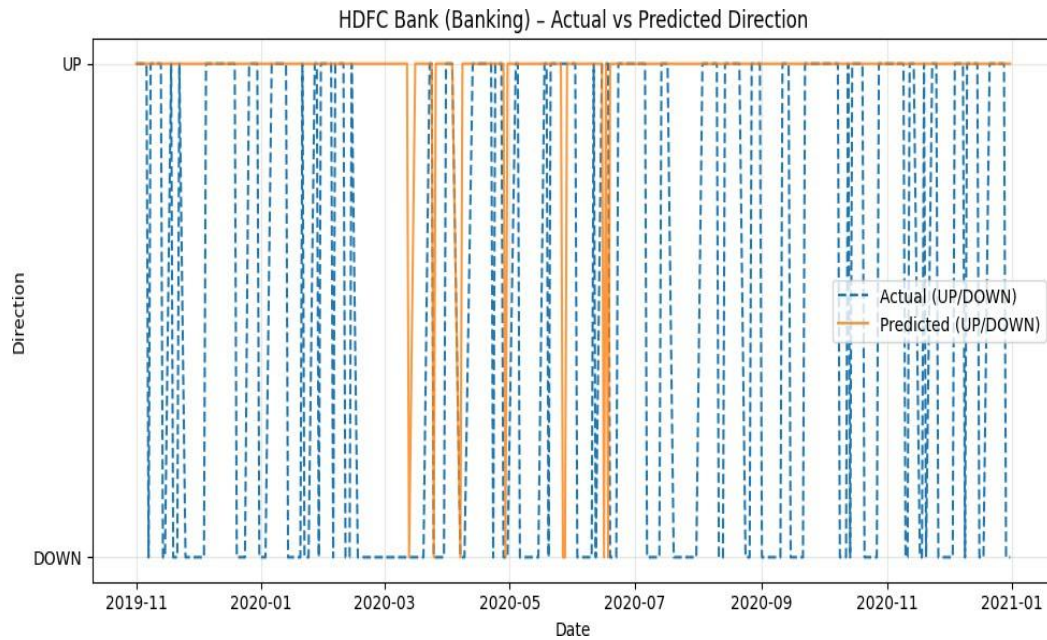
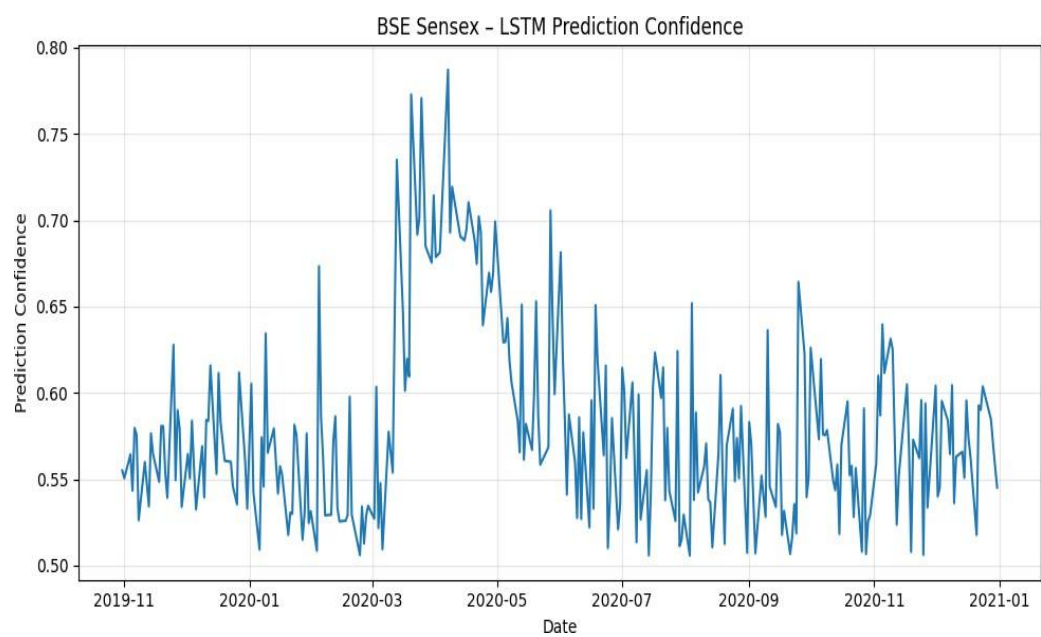HDFC Bank (Banking) – LSTM Binary Prediction (UP / DOWN)

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

HDFC Bank (Banking) – Actual vs Predicted Direction

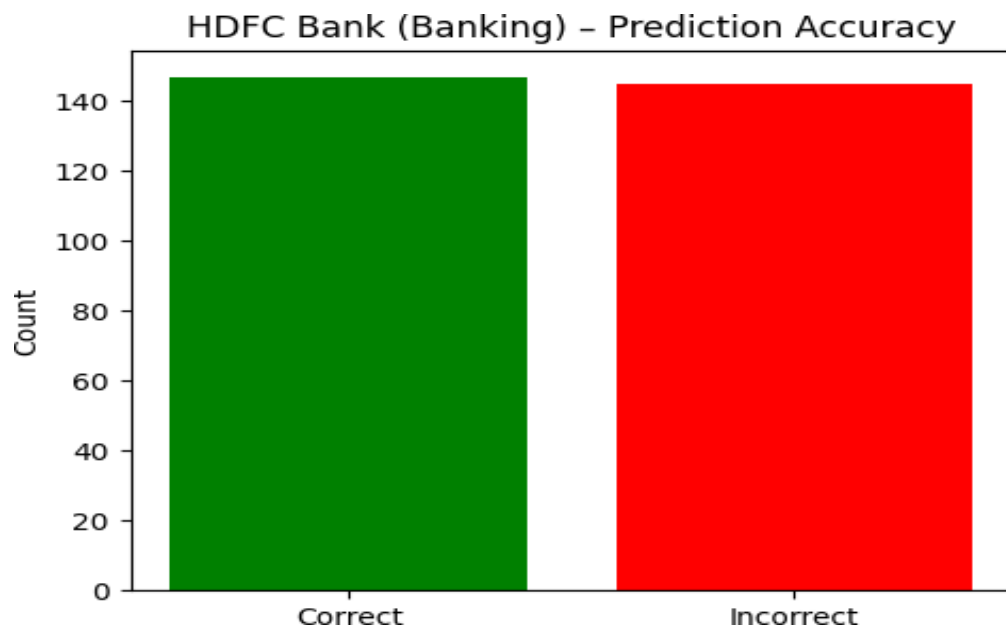- **Figure 12.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

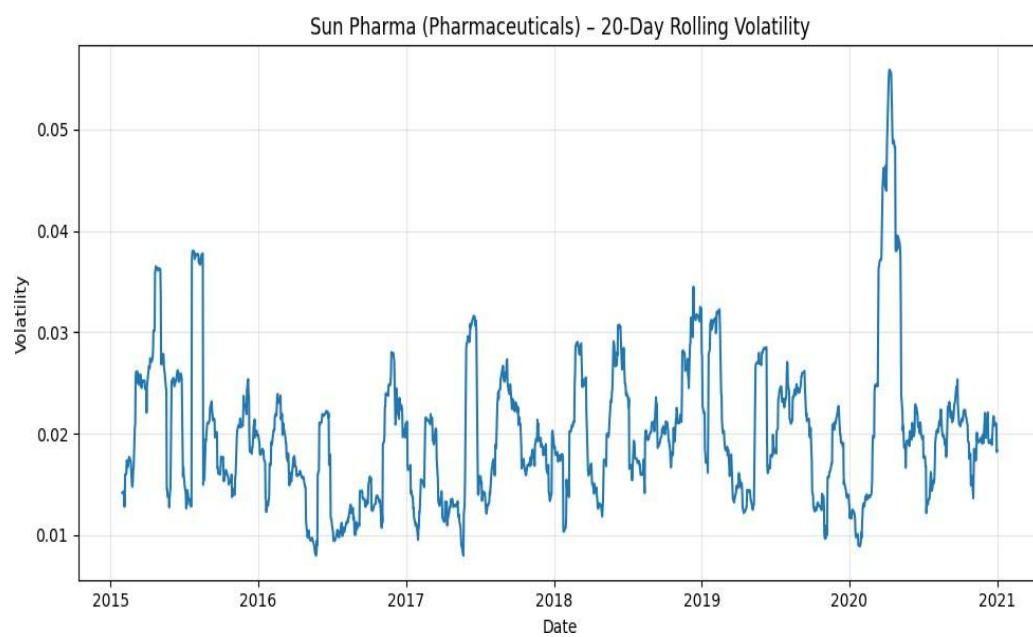BSE Sensex – LSTM Prediction Confidence

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
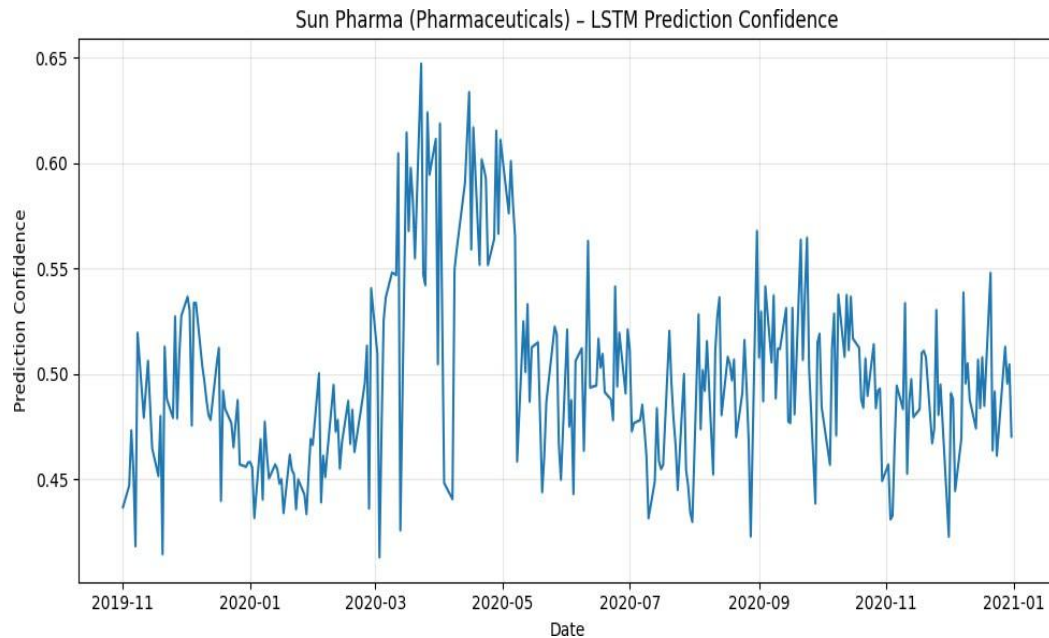

HDFC Bank (Banking) – Prediction Accuracy

- **Figure 14.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

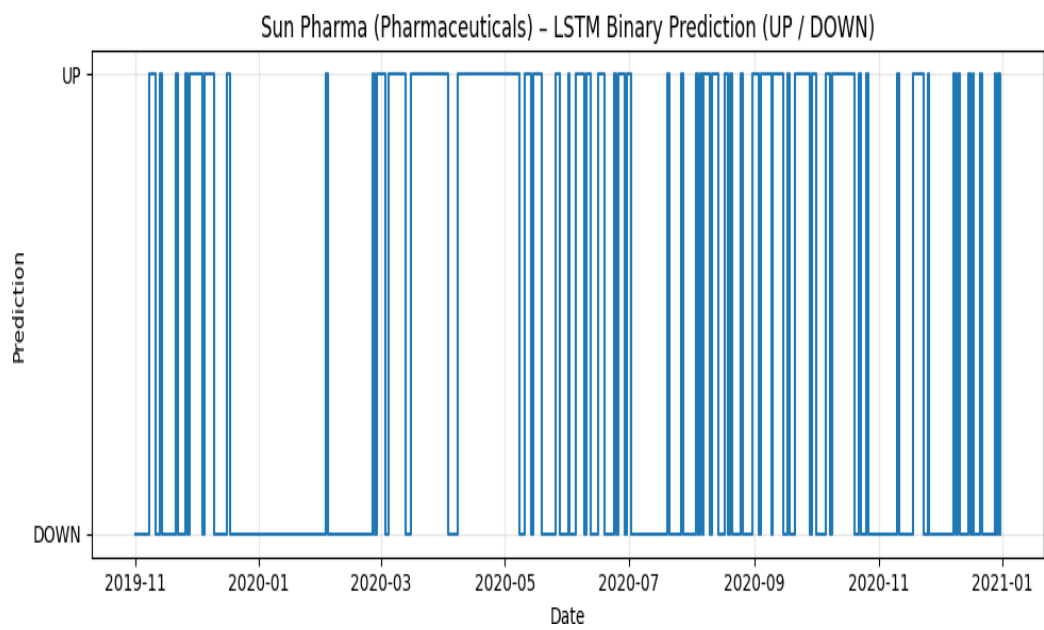Sun Pharma (Pharmaceuticals) – 20-Day Rolling Volatility

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Sun Pharma (Pharmaceuticals) – LSTM Prediction Confidence
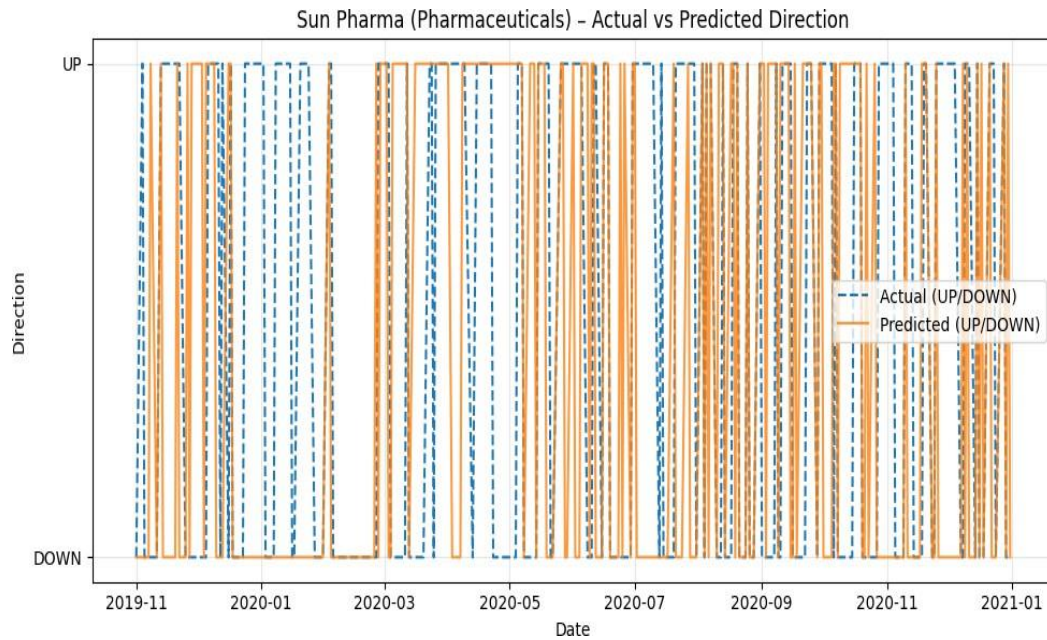
- **Figure 16.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

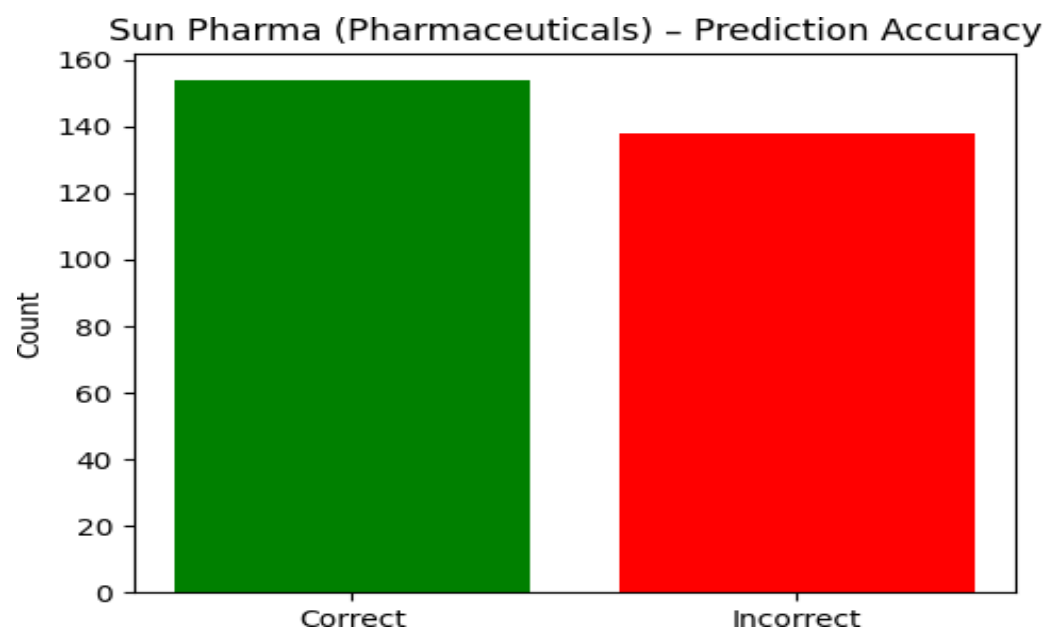Sun Pharma (Pharmaceuticals) – LSTM Binary Prediction (UP / DOWN)

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Sun Pharma (Pharmaceuticals) – Actual vs Predicted Direction

- **Figure 18.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
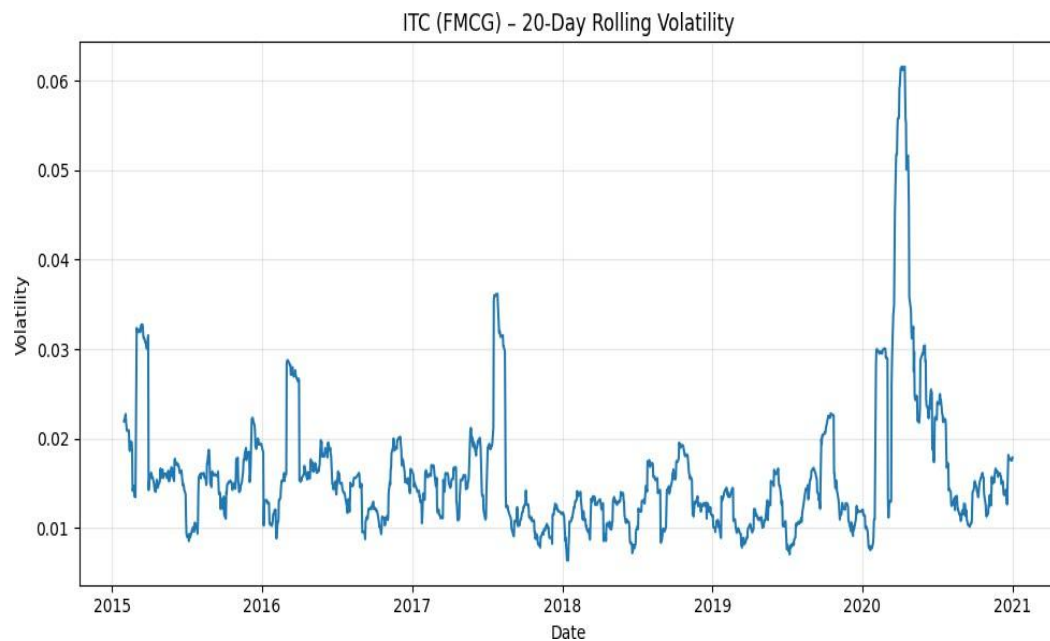
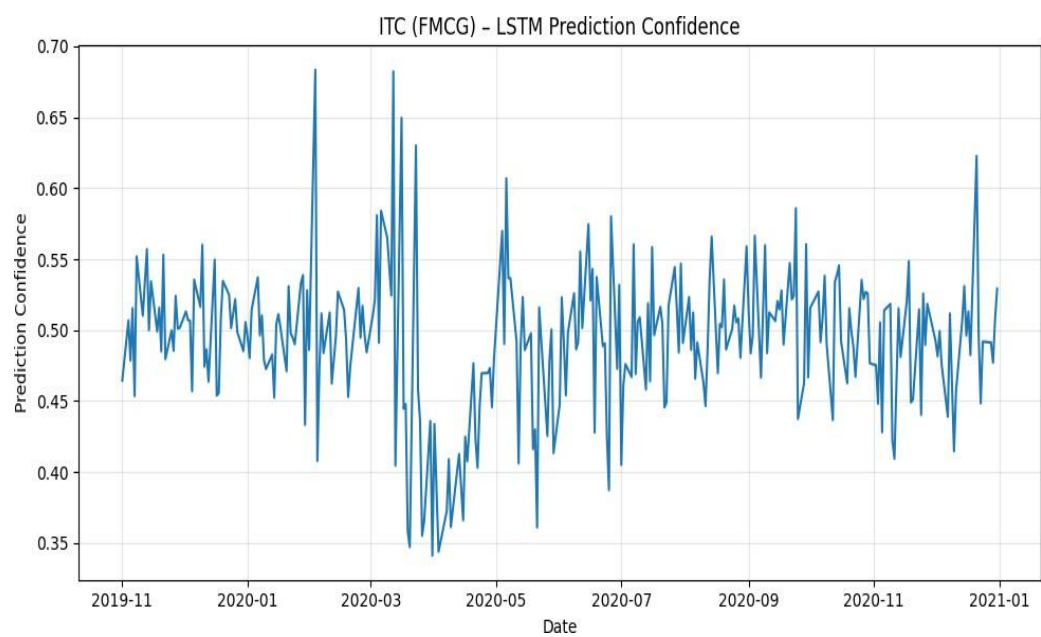Sun Pharma (Pharmaceuticals) – Prediction Accuracy

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

ITC (FMCG) – 20-Day Rolling Volatility

- **Figure 20.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
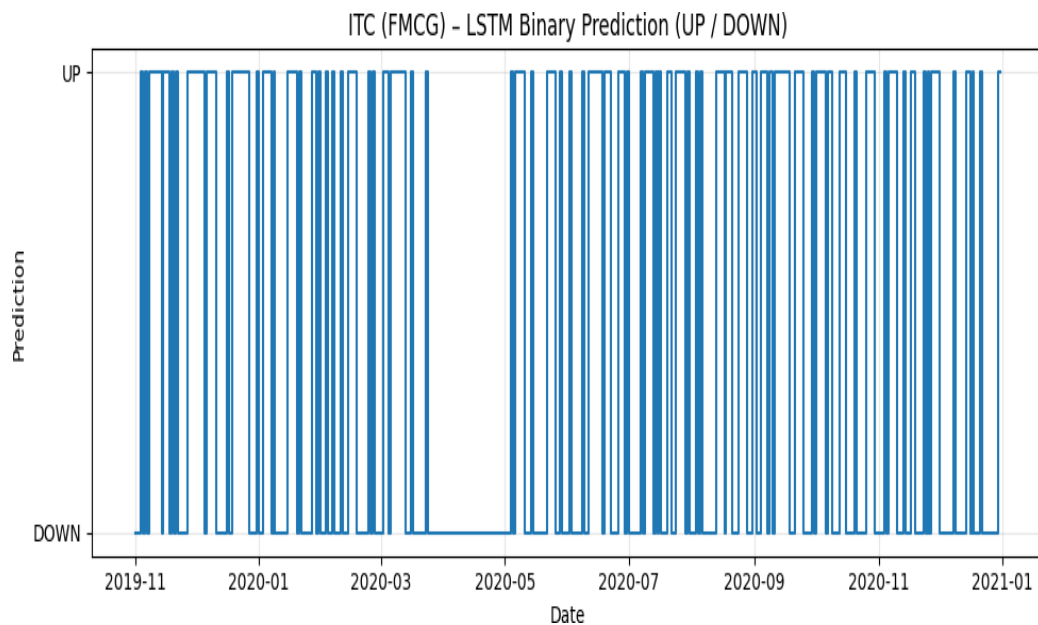
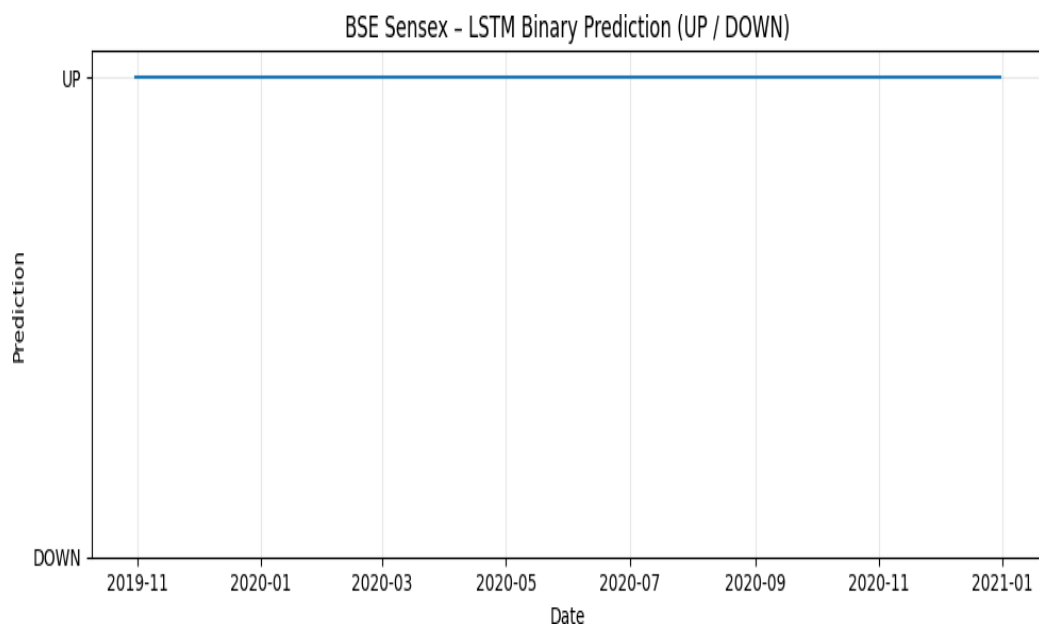ITC (FMCG) – LSTM Prediction Confidence

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

ITC (FMCG) – LSTM Binary Prediction (UP / DOWN)

- **Figure 22.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
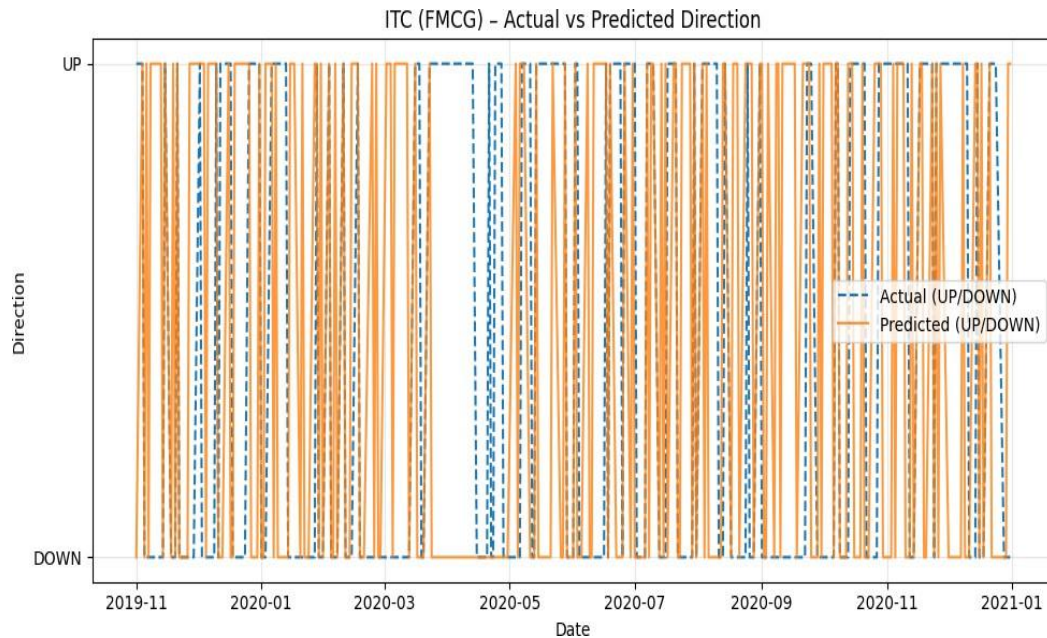
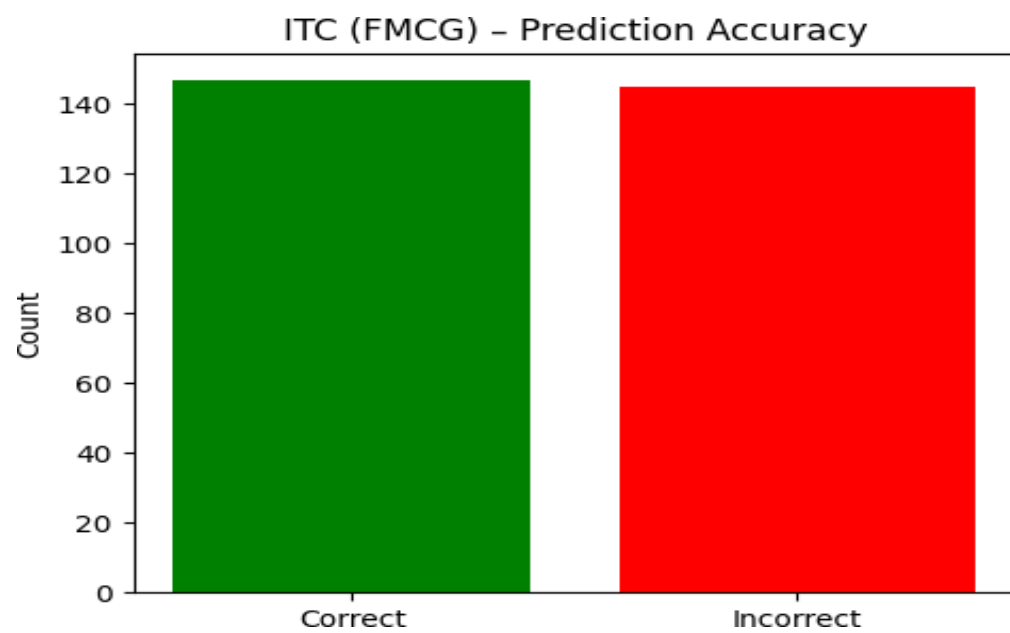BSE Sensex – LSTM Binary Prediction (UP / DOWN)

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

ITC (FMCG) – Actual vs Predicted Direction

- **Figure 24.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
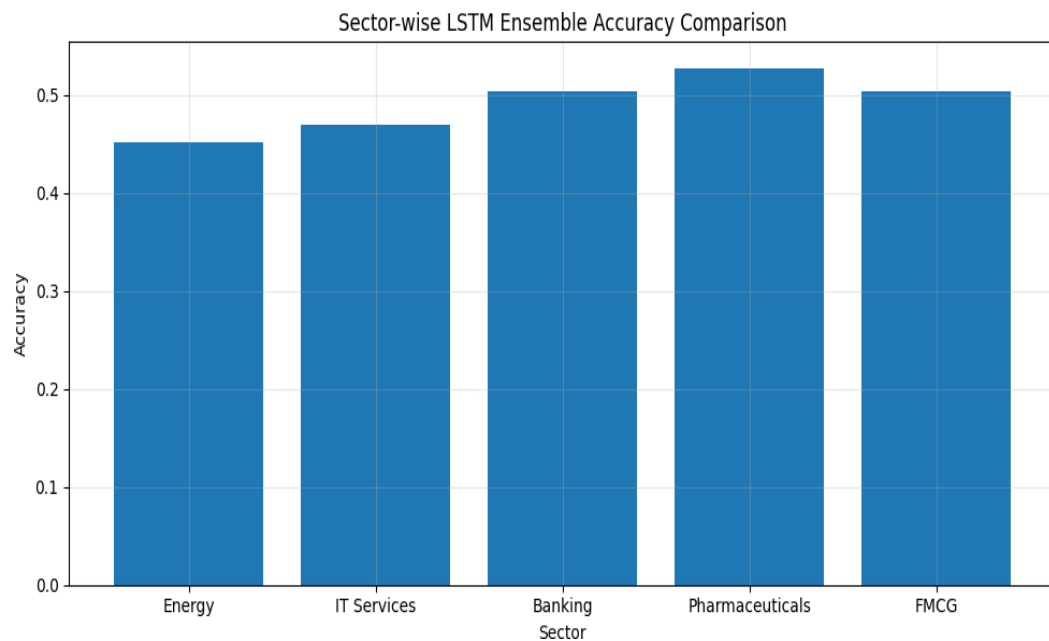
ITC (FMCG) – Prediction Accuracy

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Sector-wise LSTM Ensemble Accuracy Comparison

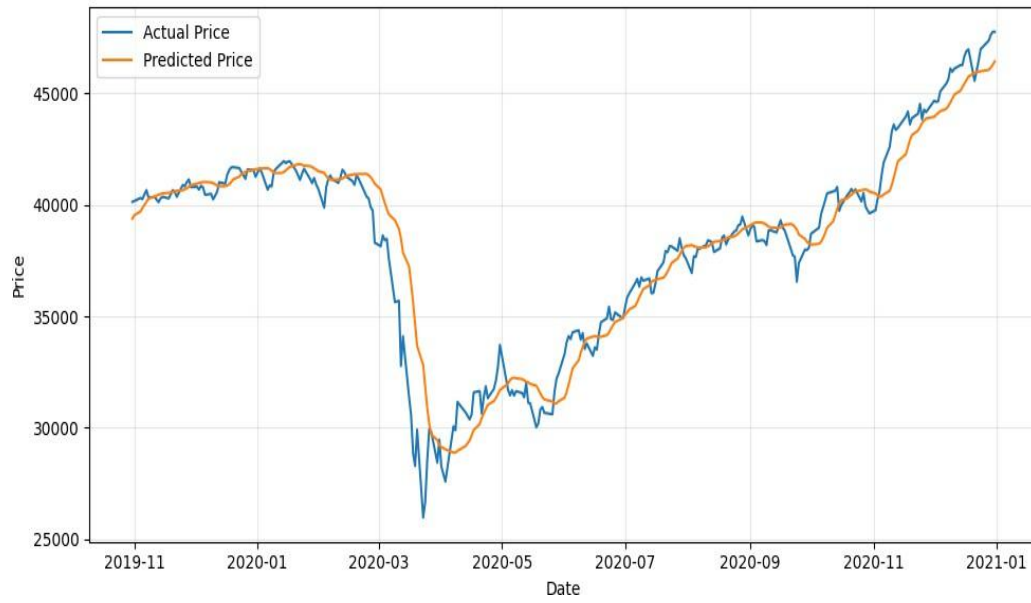- **Figure 26.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
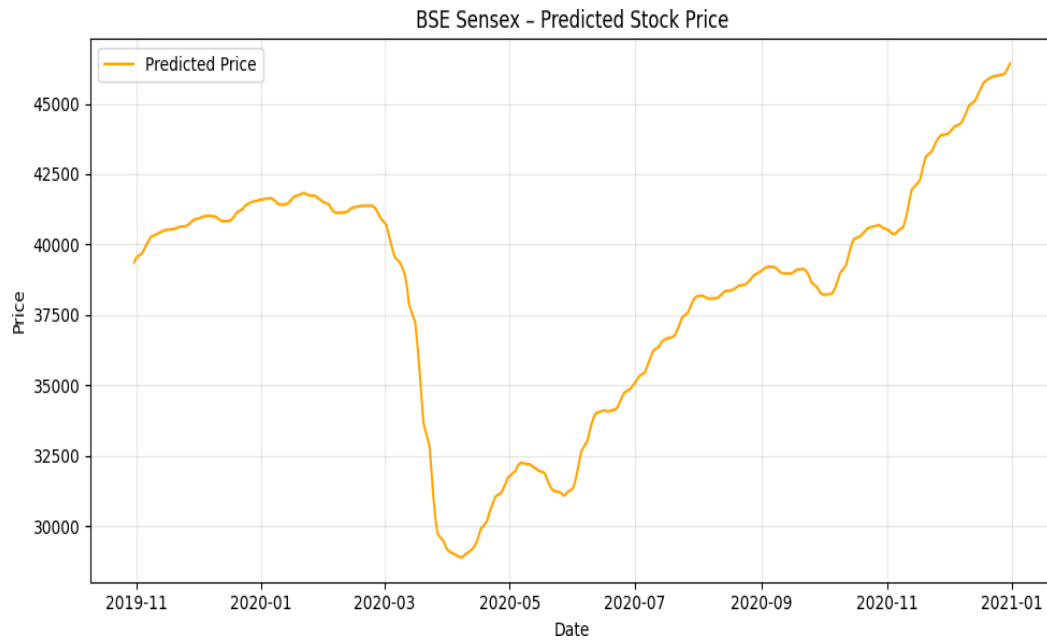
BSE Sensex – Actual vs Predicted Stock Price

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
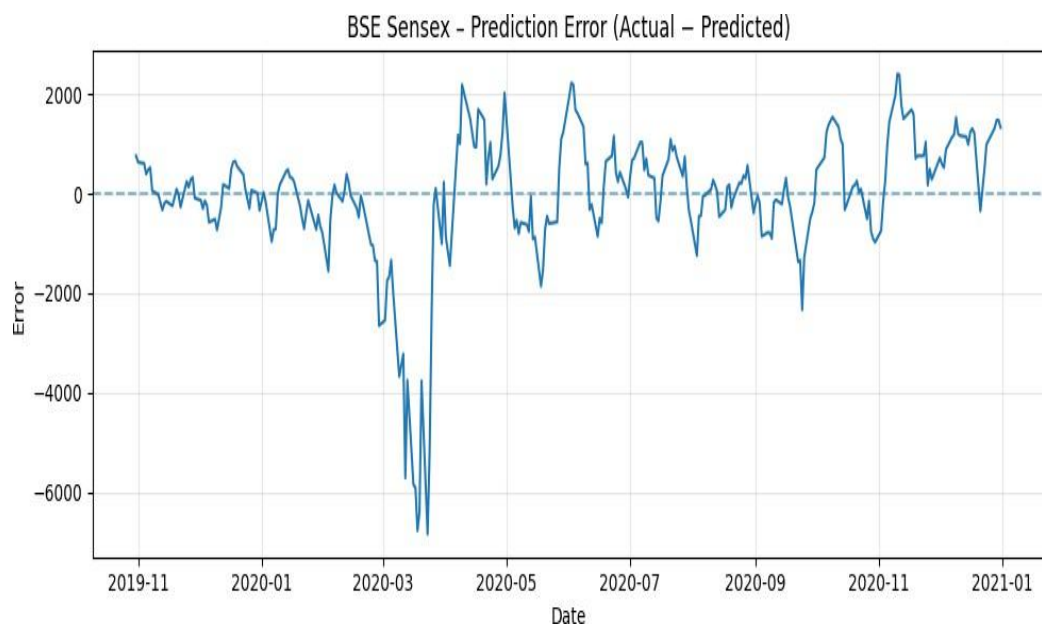

BSE Sensex – Predicted Stock Price
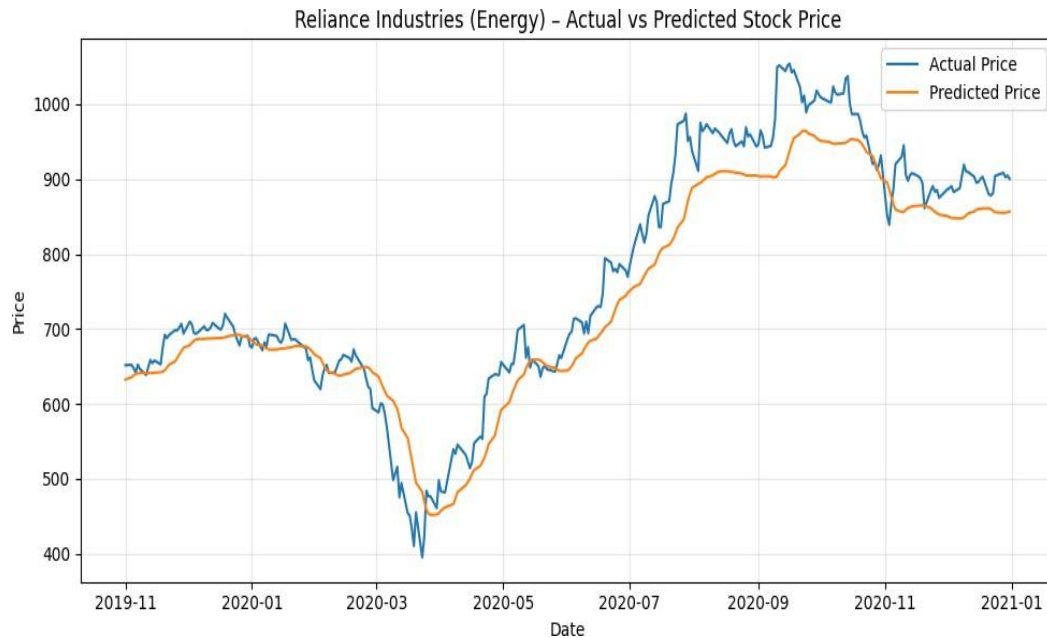
- **Figure 28.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

BSE Sensex – Prediction Error (Actual − Predicted)

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
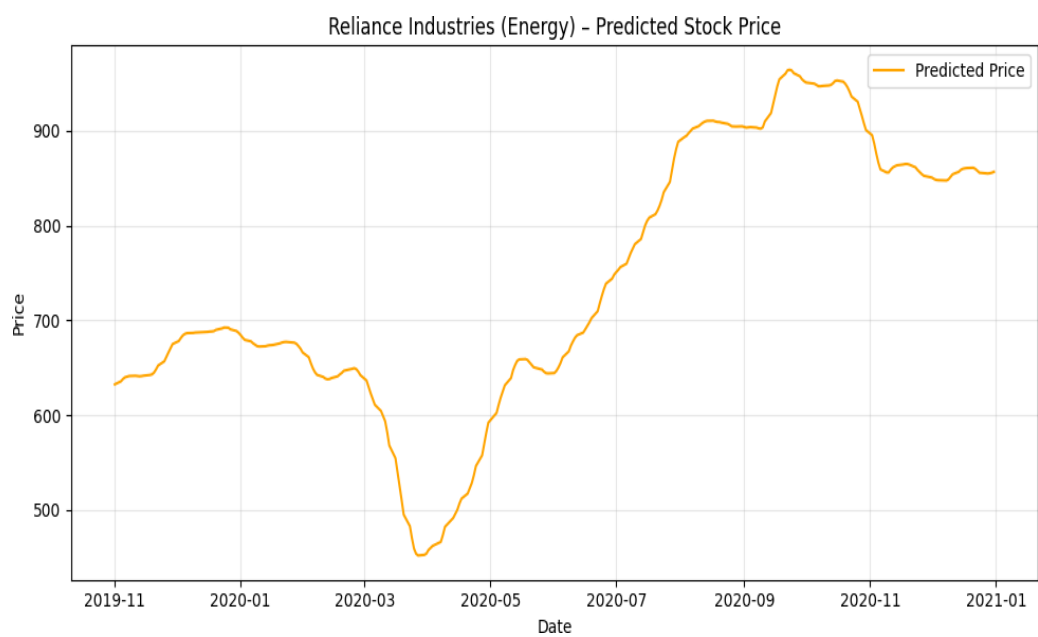

Reliance Industries (Energy) – Actual vs Predicted Stock Price
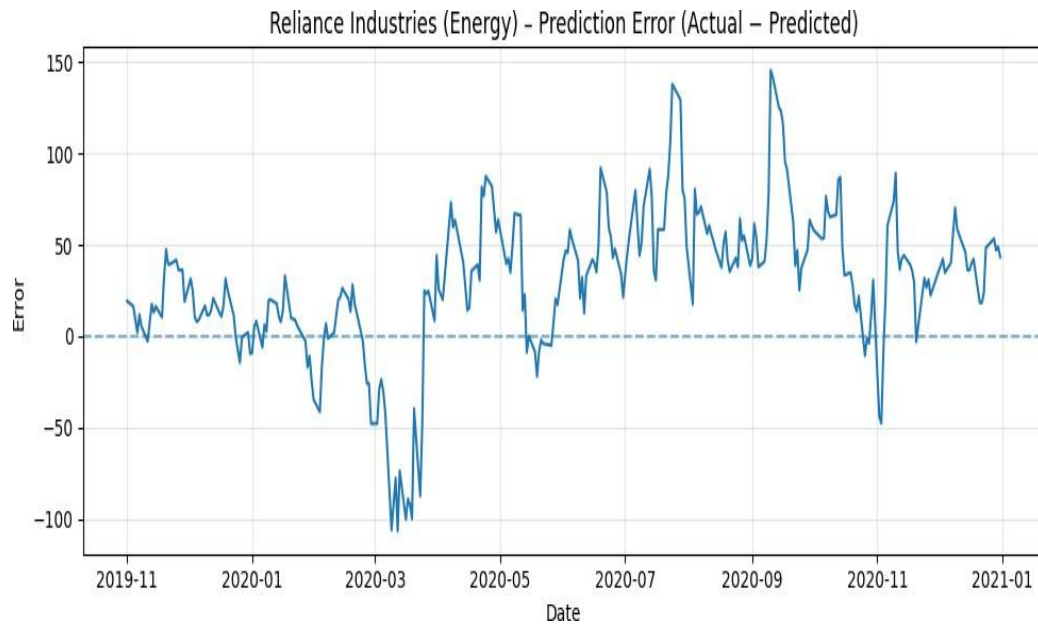
- **Figure 30.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Reliance Industries (Energy) – Predicted Stock Price

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Reliance Industries (Energy) – Prediction Error (Actual – Predicted)
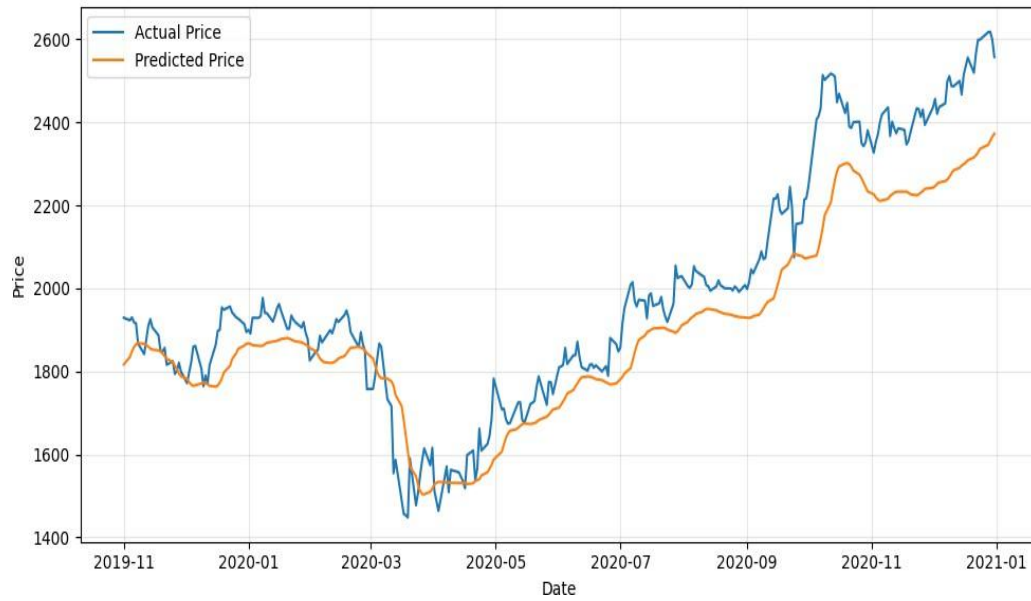
- **Figure 32.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
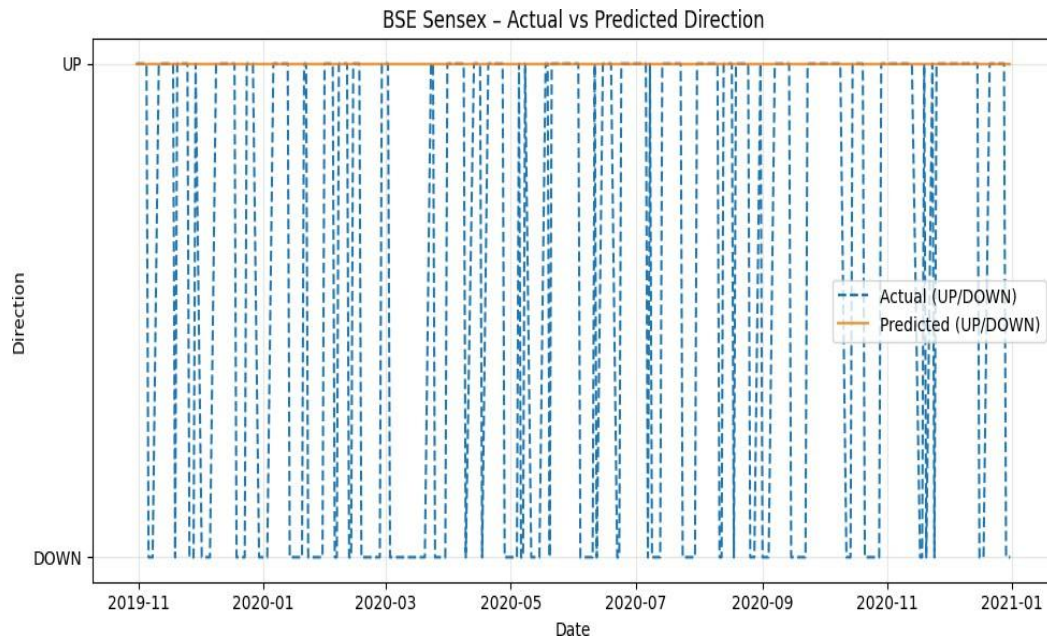
TCS (IT Services) – Actual vs Predicted Stock Price

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

BSE Sensex – Actual vs Predicted Direction

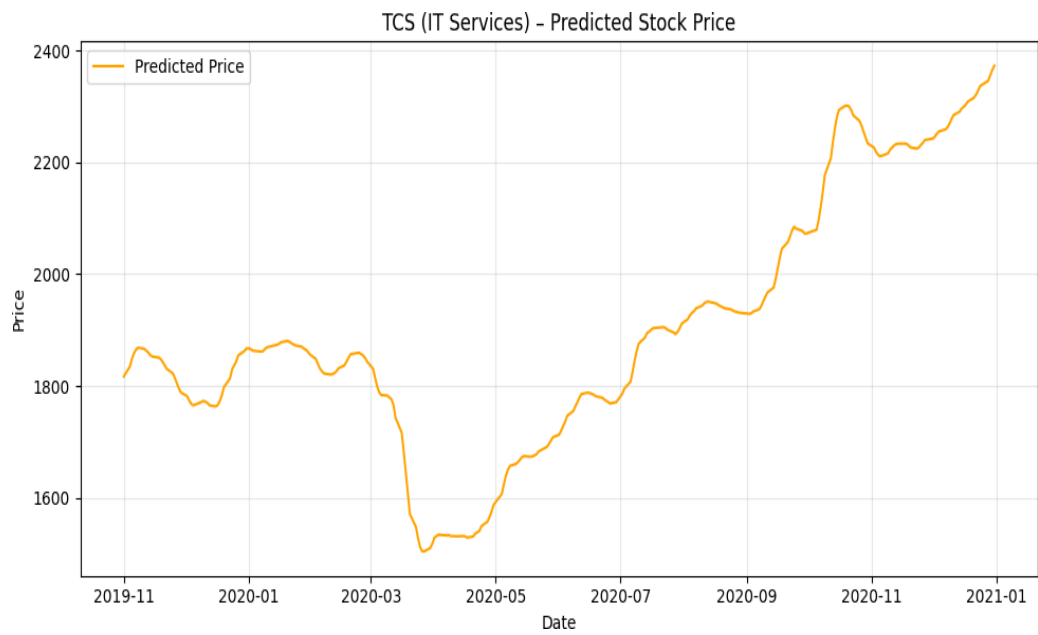- **Figure 34.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

TCS (IT Services) – Predicted Stock Price

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
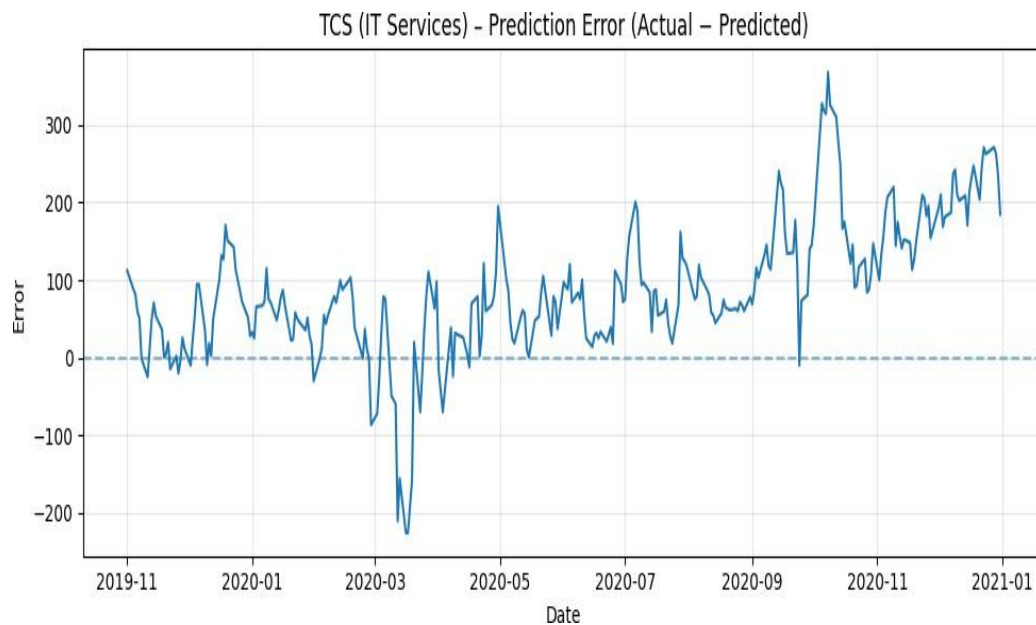

TCS (IT Services) – Prediction Error (Actual – Predicted)
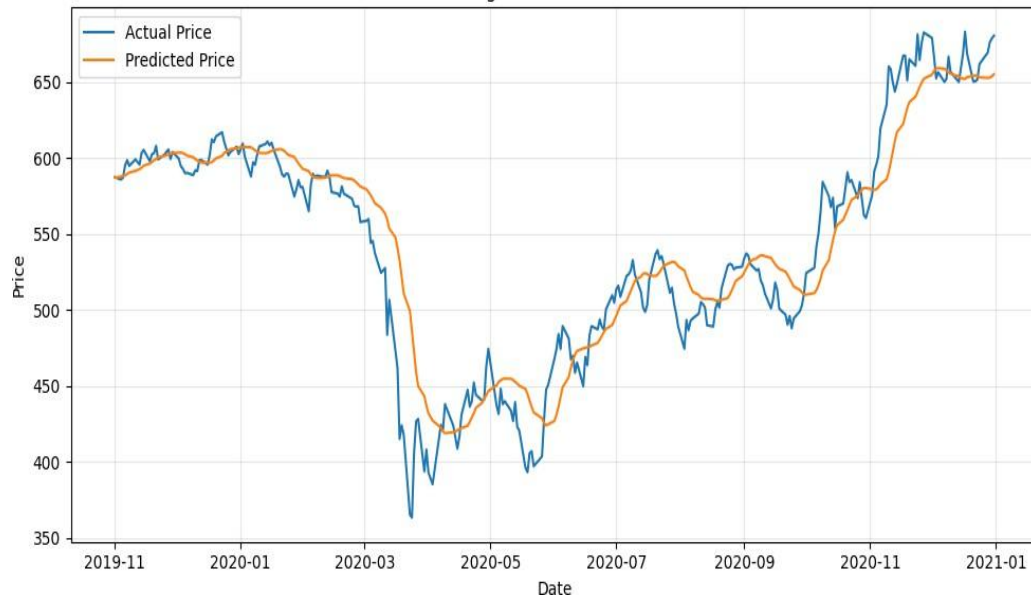
- **Figure 36.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
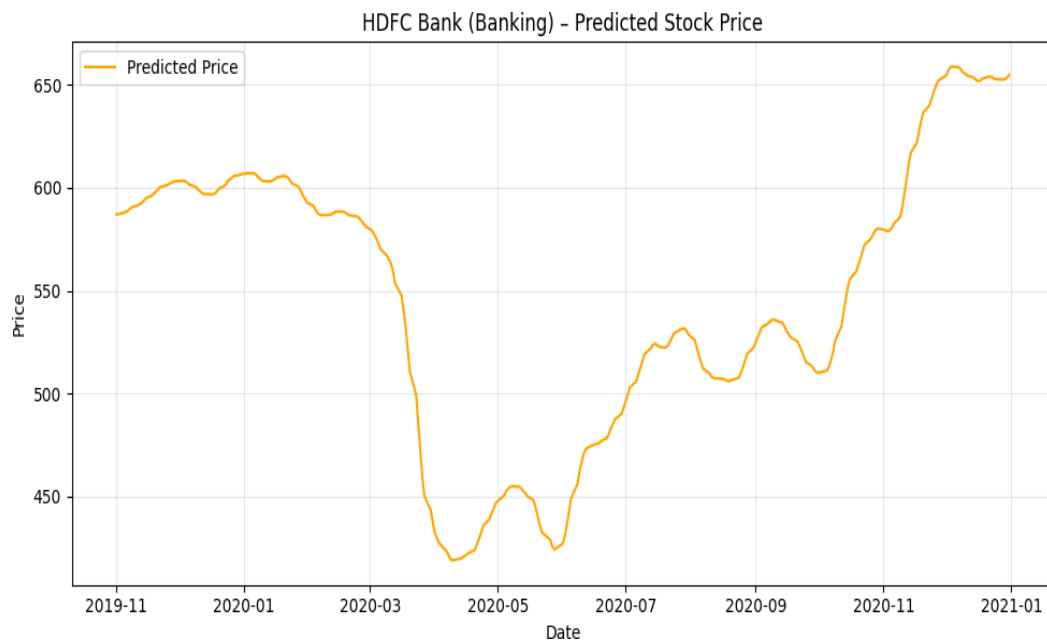
HDFC Bank (Banking) – Actual vs Predicted Stock Price

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

HDFC Bank (Banking) – Predicted Stock Price

- **Figure 38.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
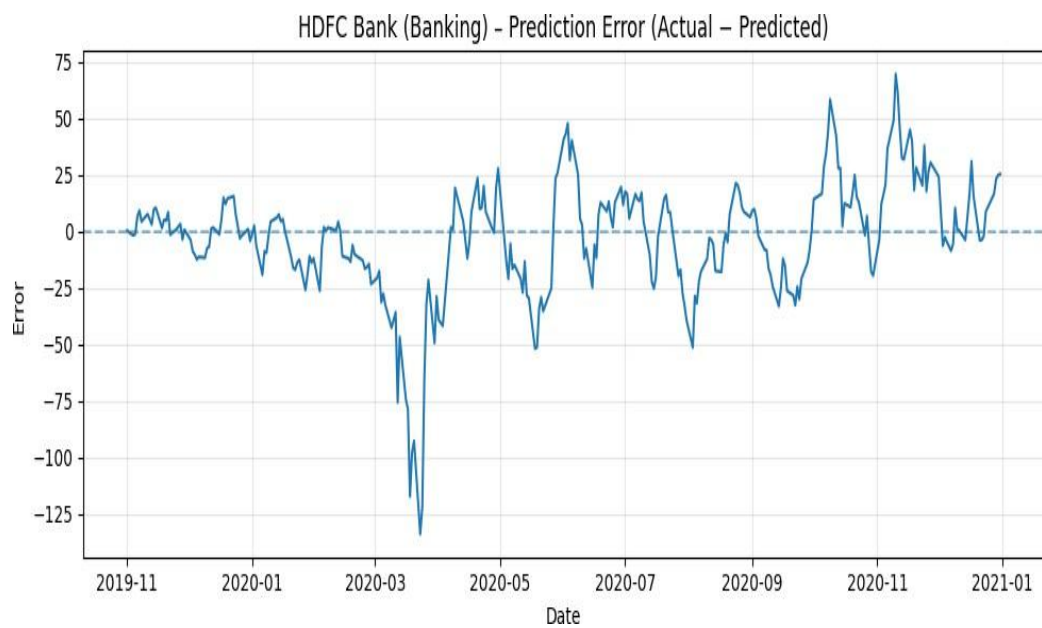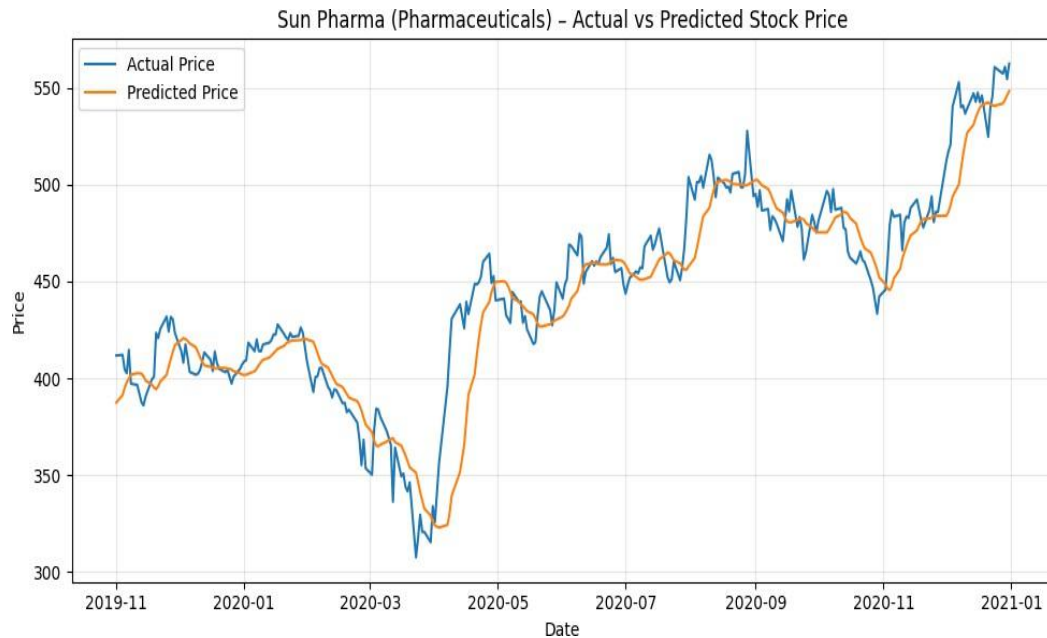
HDFC Bank (Banking) – Prediction Error (Actual − Predicted)

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
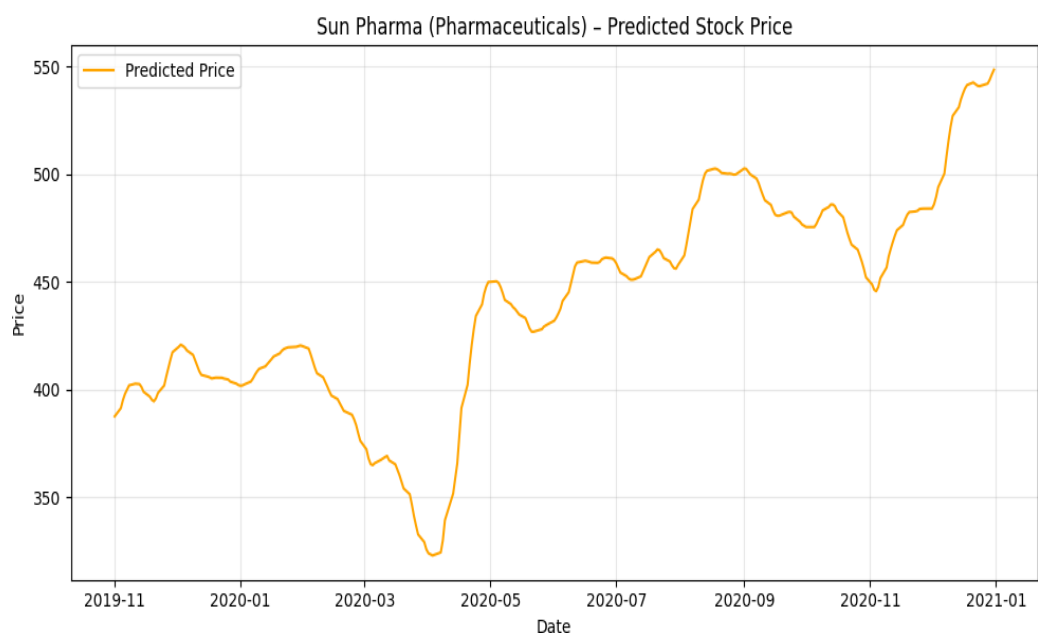

Sun Pharma (Pharmaceuticals) – Actual vs Predicted Stock Price
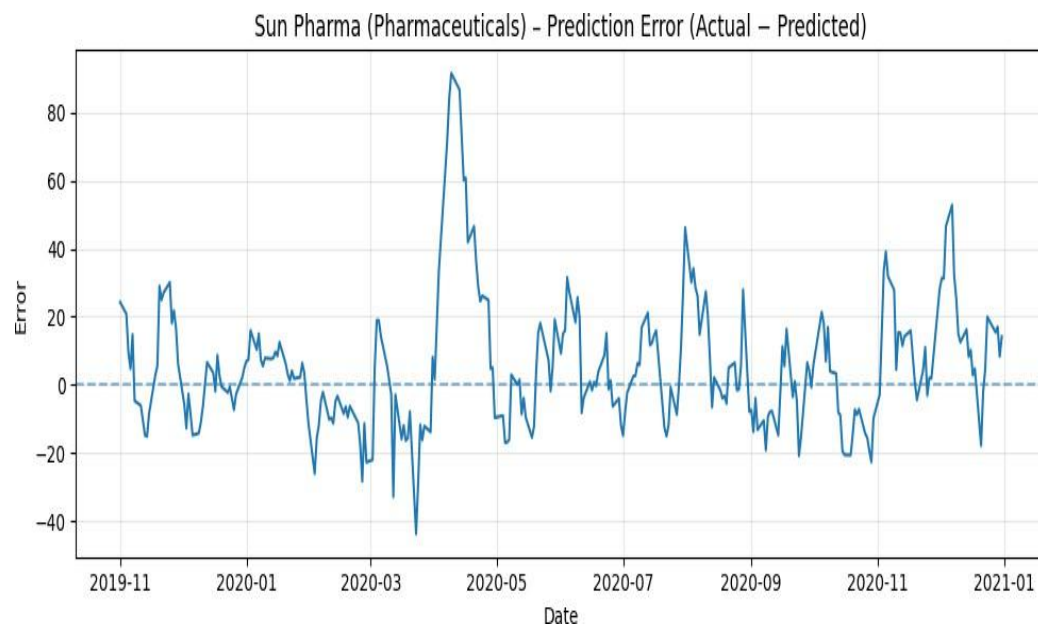
- **Figure 40.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Sun Pharma (Pharmaceuticals) – Predicted Stock Price

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Sun Pharma (Pharmaceuticals) – Prediction Error (Actual – Predicted)
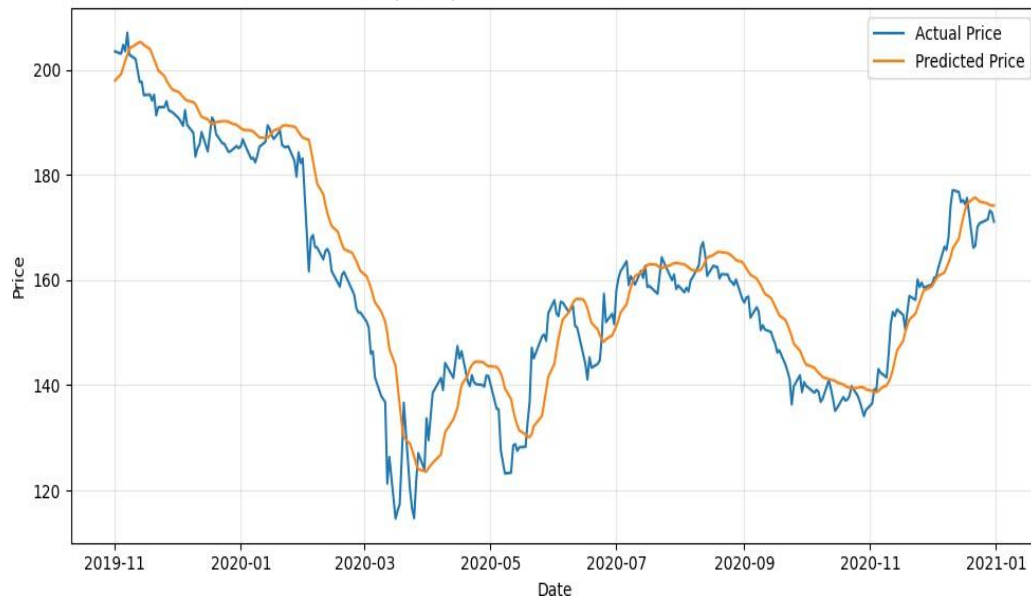
- **Figure 42.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

ITC (FMCG) – Actual vs Predicted Stock Price

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
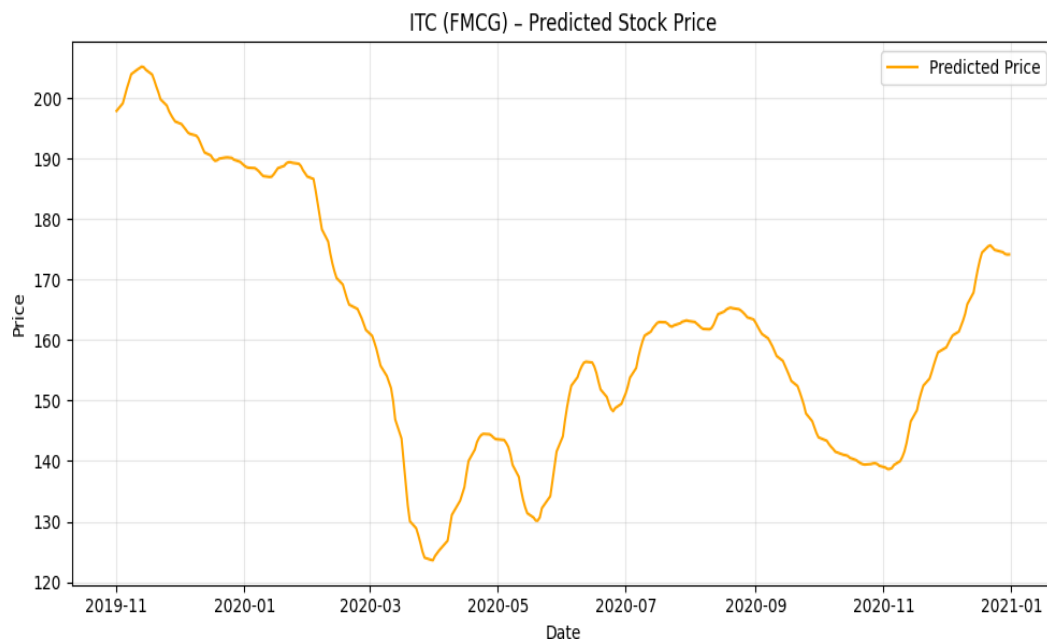

ITC (FMCG) – Predicted Stock Price
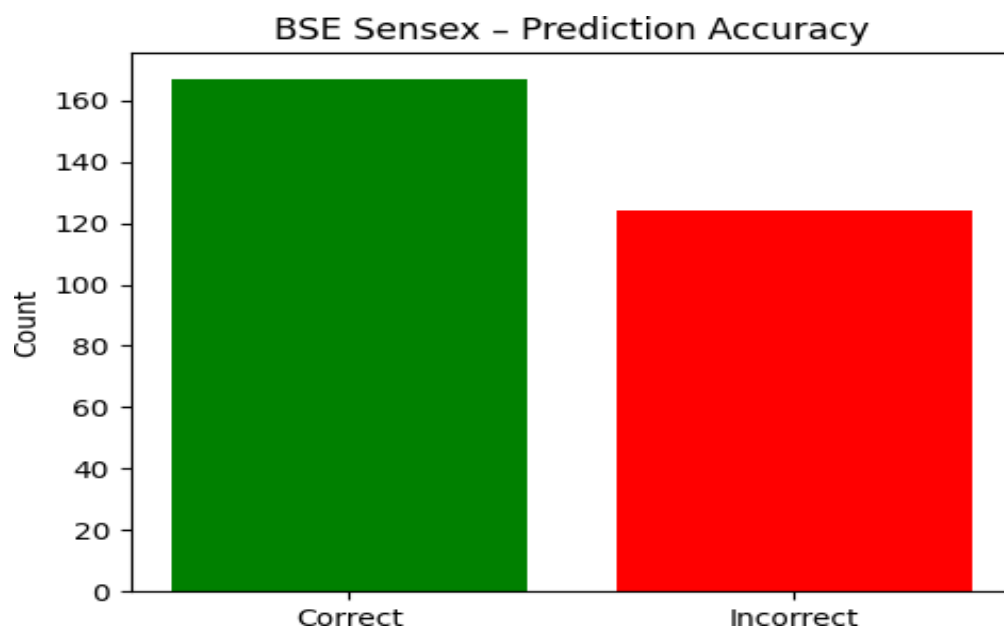
- **Figure 44.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

BSE Sensex – Prediction Accuracy

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
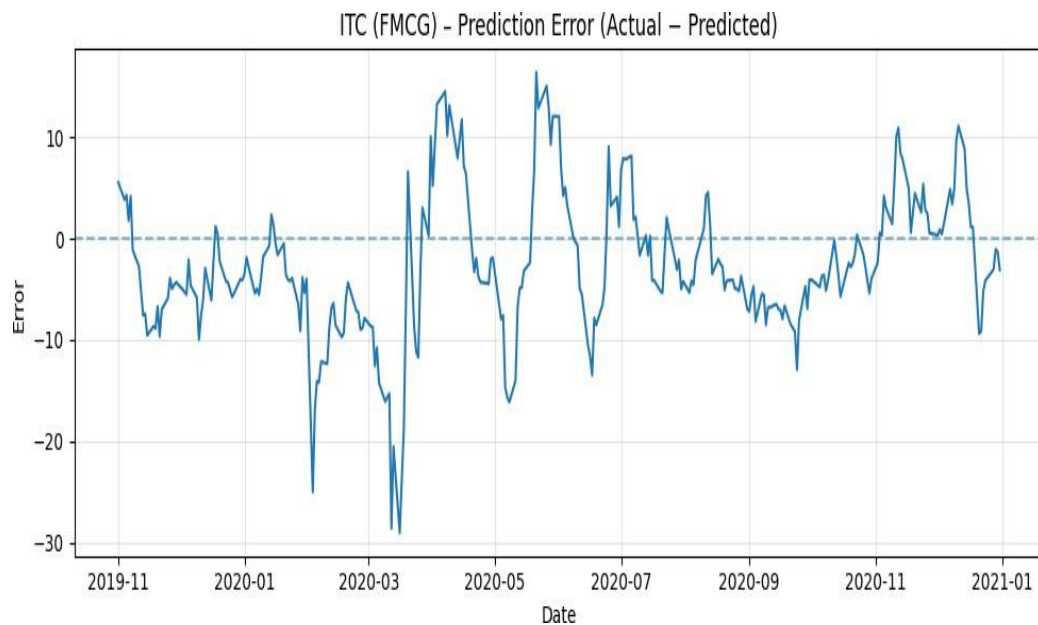

ITC (FMCG) – Prediction Error (Actual – Predicted)

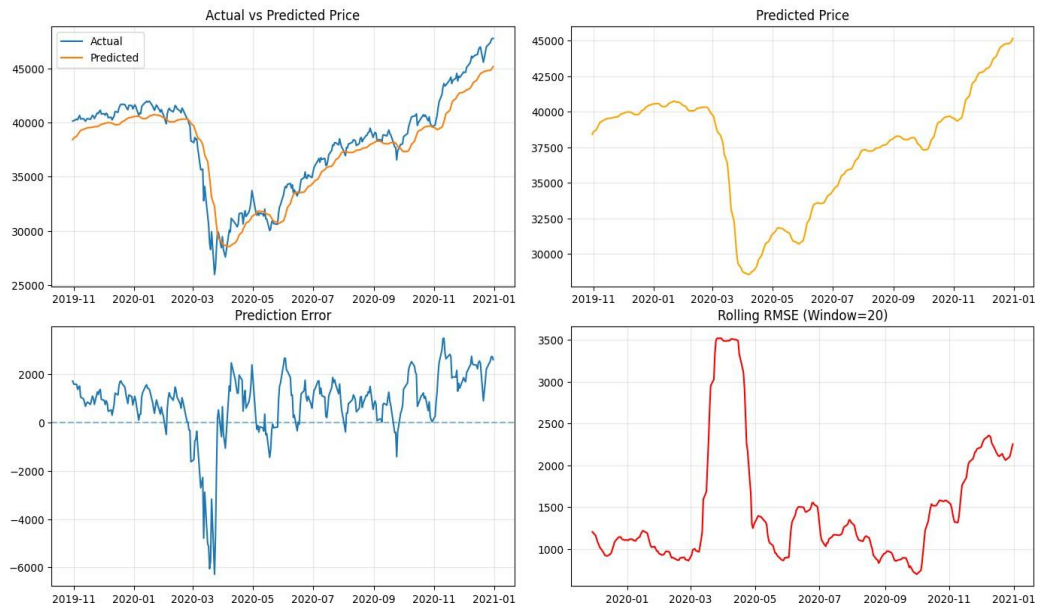- **Figure 46.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

BSE Sensex – LSTM Price Prediction Dashboard

Actual vs Predicted Price

Predicted Price

Prediction Error

Rolling RMSE (Window=20)

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
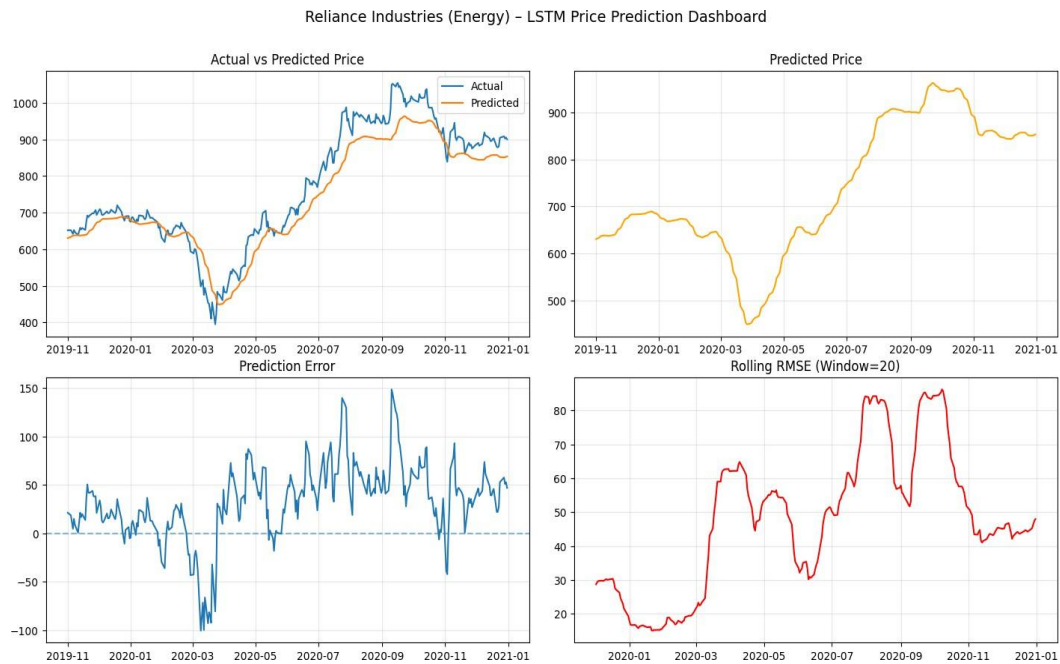

Reliance Industries (Energy) – LSTM Price Prediction Dashboard
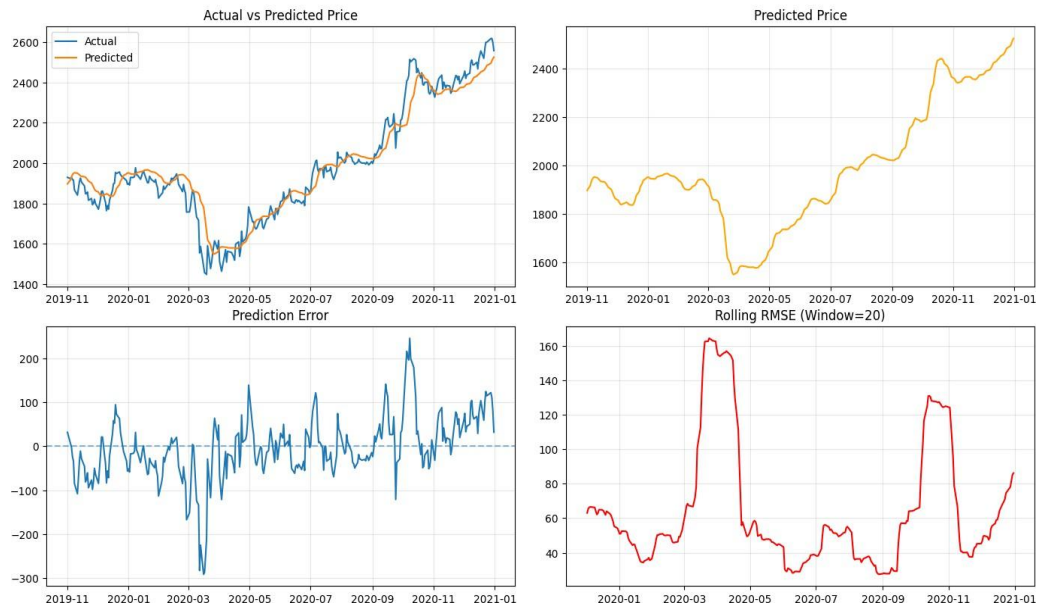
- **Figure 48.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
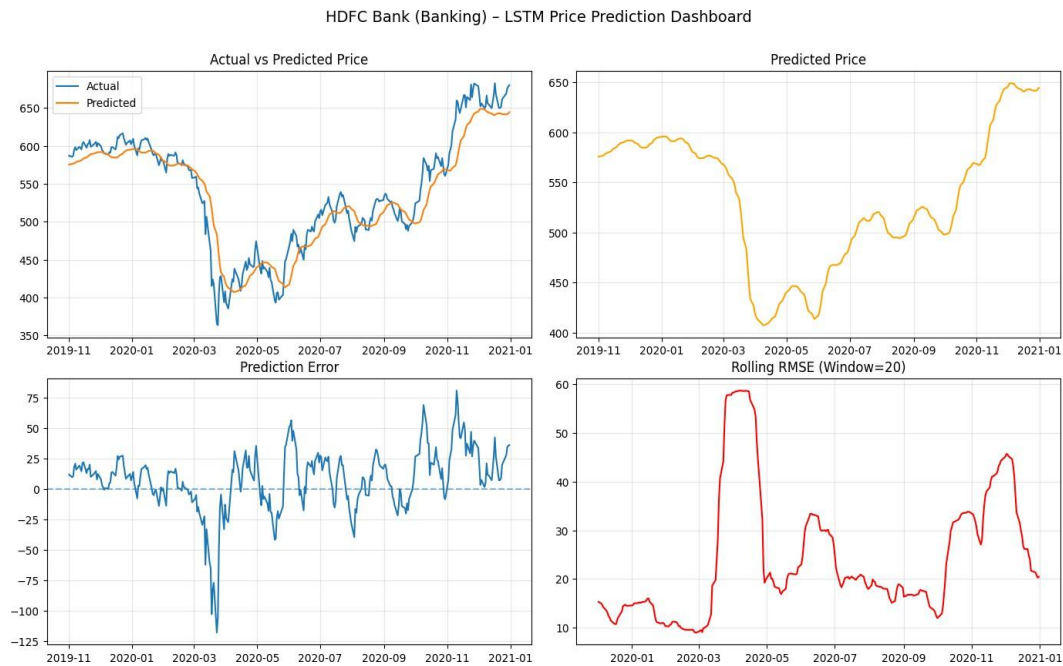
TCS (IT Services) – LSTM Price Prediction Dashboard

Actual vs Predicted Price

Predicted Price

Prediction Error

Rolling RMSE (Window=20)

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

HDFC Bank (Banking) – LSTM Price Prediction Dashboard

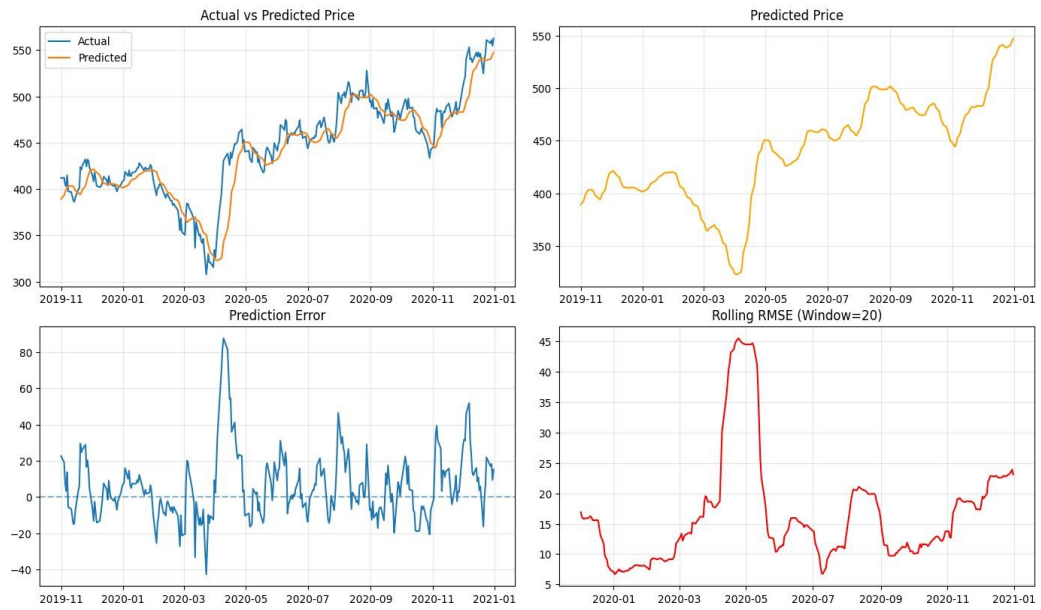- **Figure 50.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

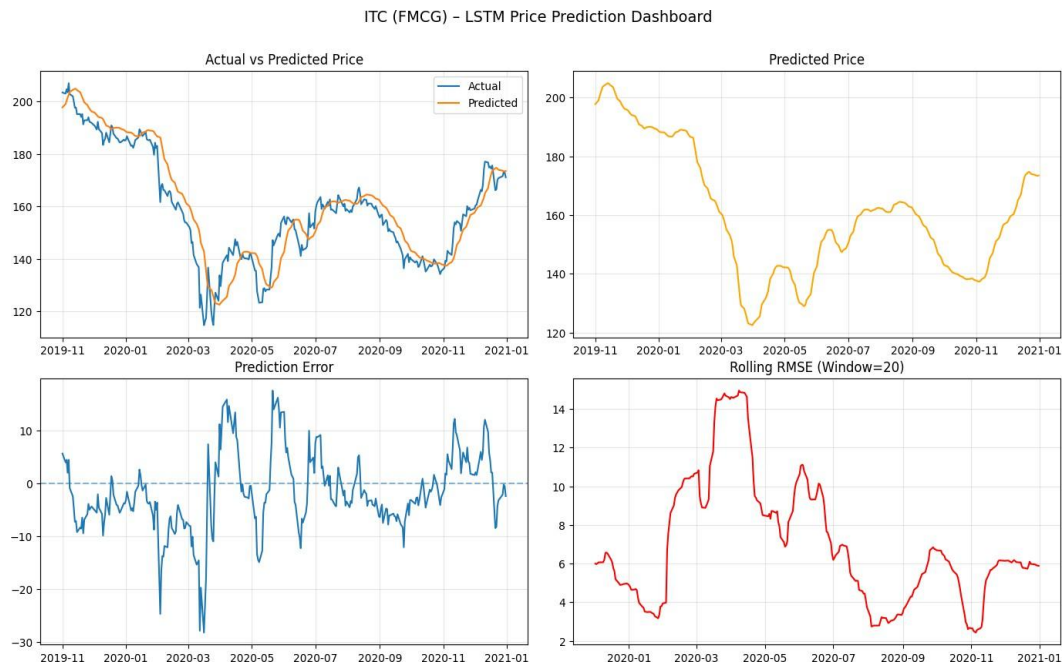## Sun Pharma (Pharmaceuticals) – LSTM Price Prediction Dashboard

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

ITC (FMCG) – LSTM Price Prediction Dashboard

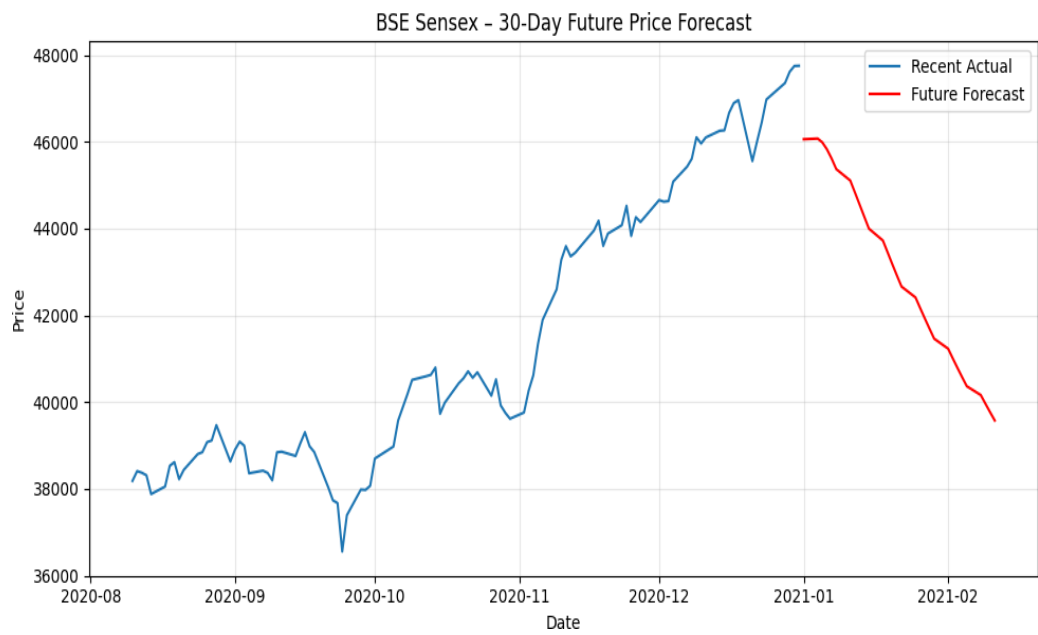- **Figure 52.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
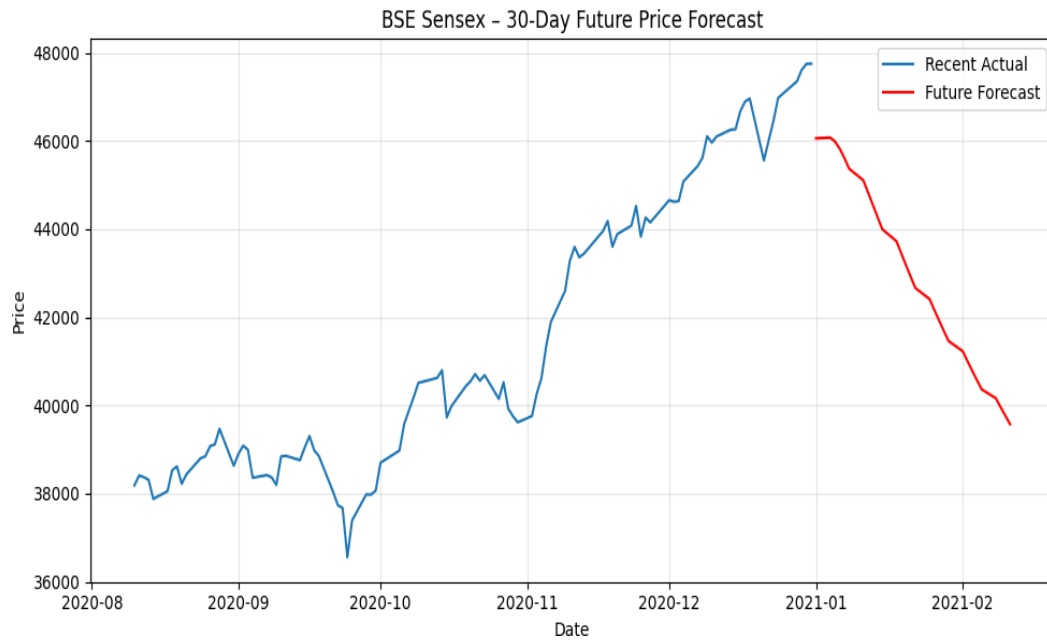
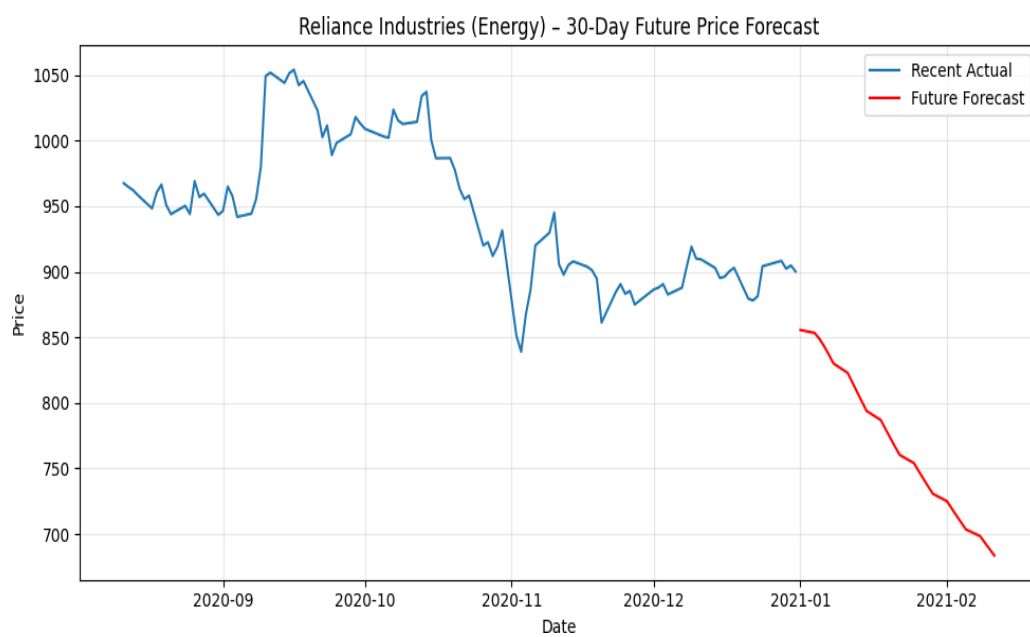BSE Sensex – 30-Day Future Price Forecast

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

BSE Sensex – 30-Day Future Price Forecast

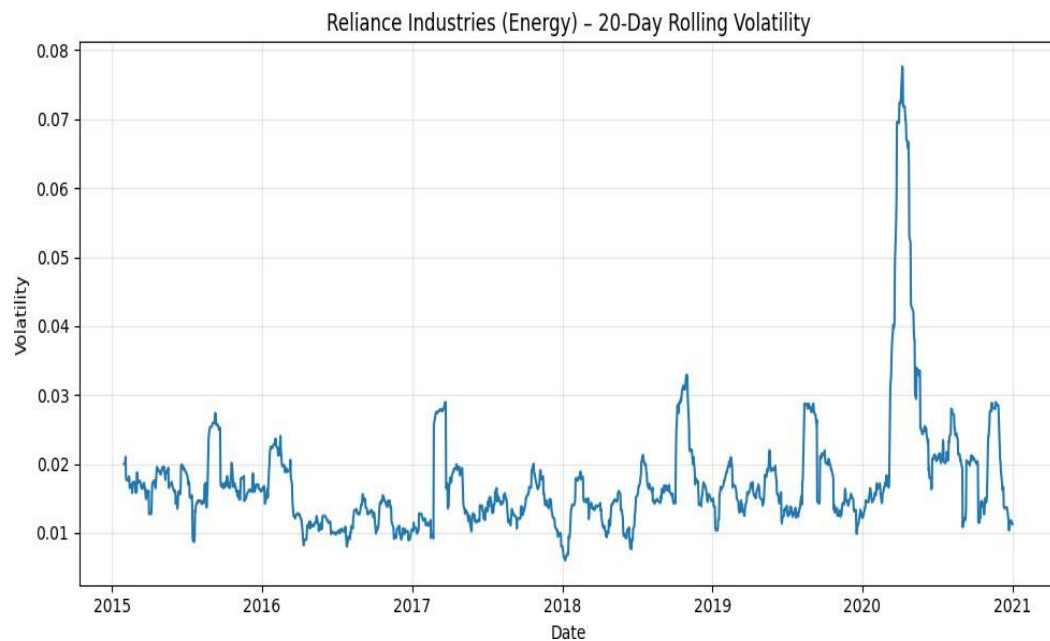- **Figure 54.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Reliance Industries (Energy) – 30-Day Future Price Forecast

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
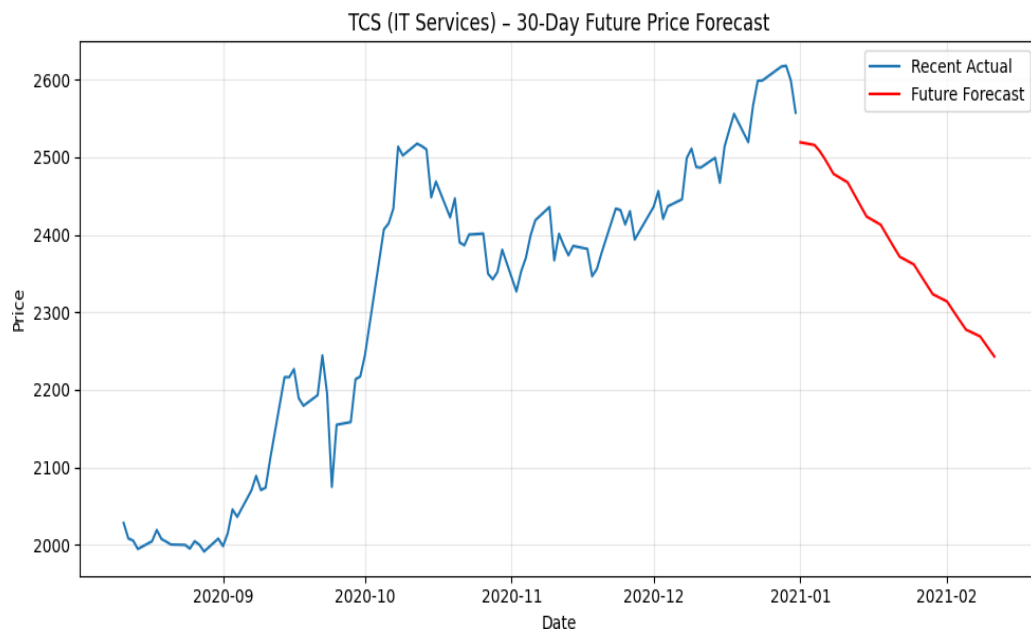

Reliance Industries (Energy) – 20-Day Rolling Volatility
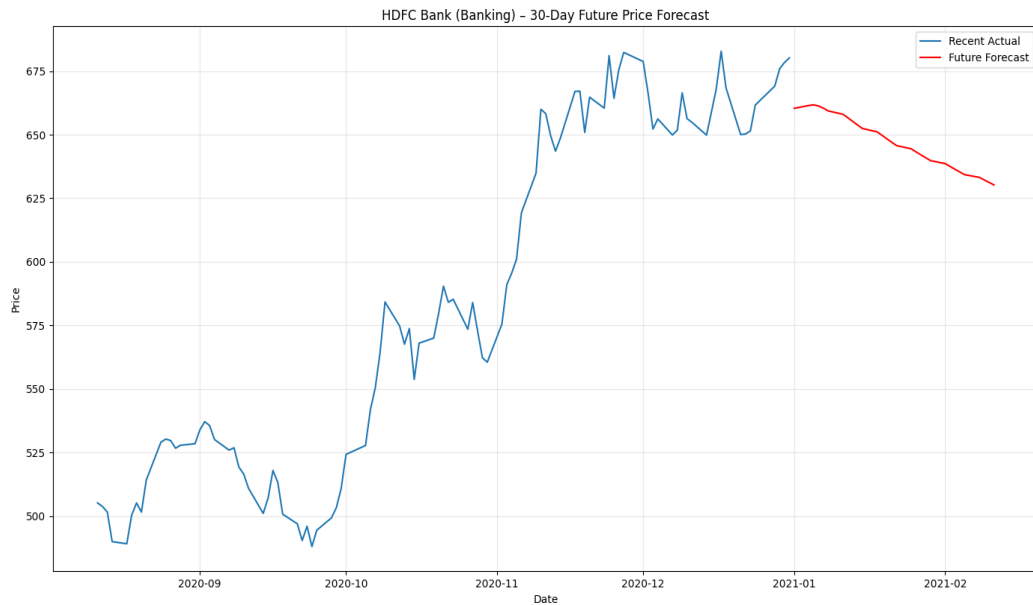
- **Figure 56.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

TCS (IT Services) – 30-Day Future Price Forecast

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

HDFC Bank (Banking) – 30-Day Future Price Forecast

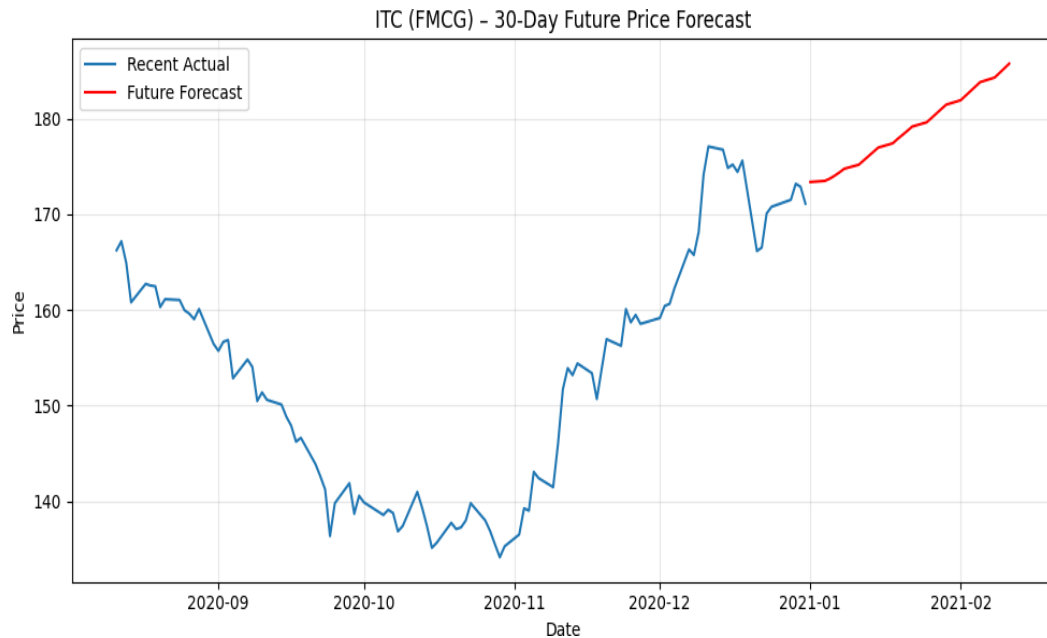- **Figure 58.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Sun Pharma (Pharmaceuticals) – 30-Day Future Price Forecast

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

ITC (FMCG) – 30-Day Future Price Forecast

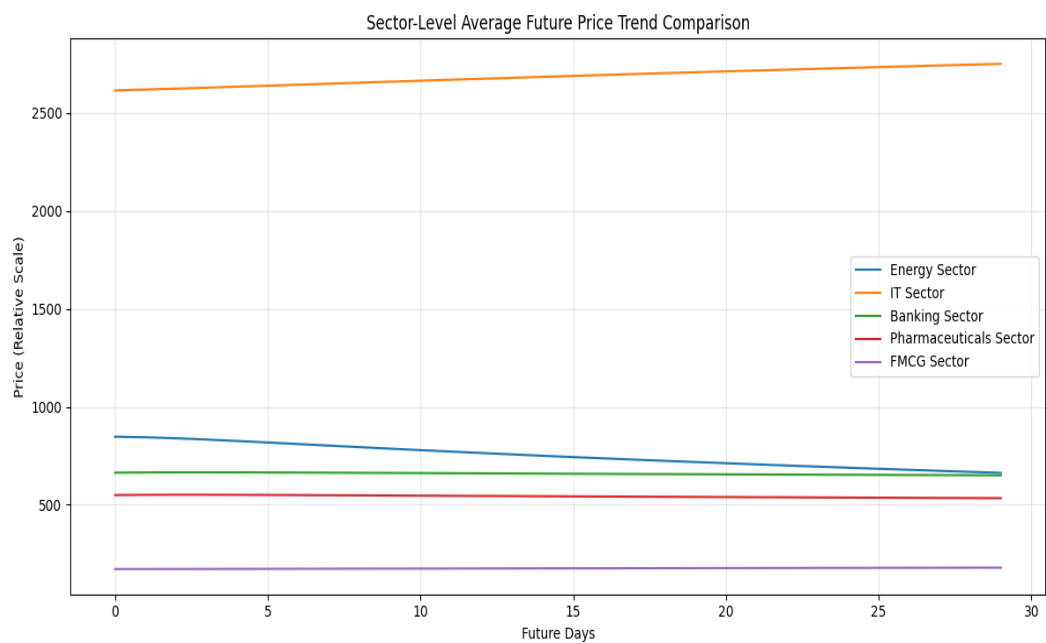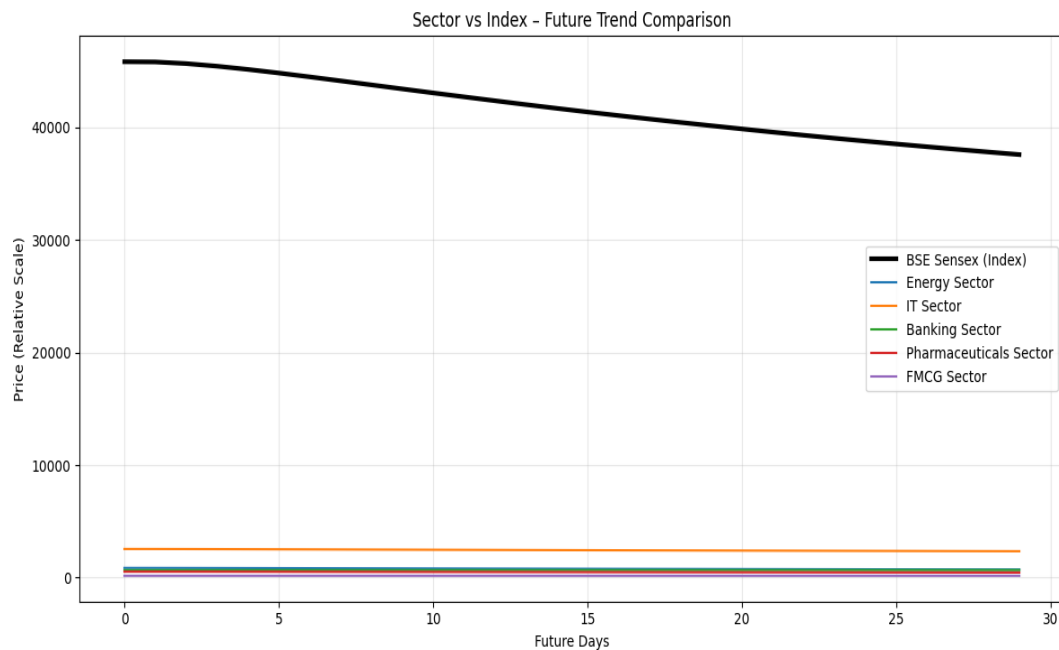- **Figure 60.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Sector-Level Average Future Price Trend Comparison

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Sector vs Index – Future Trend Comparison

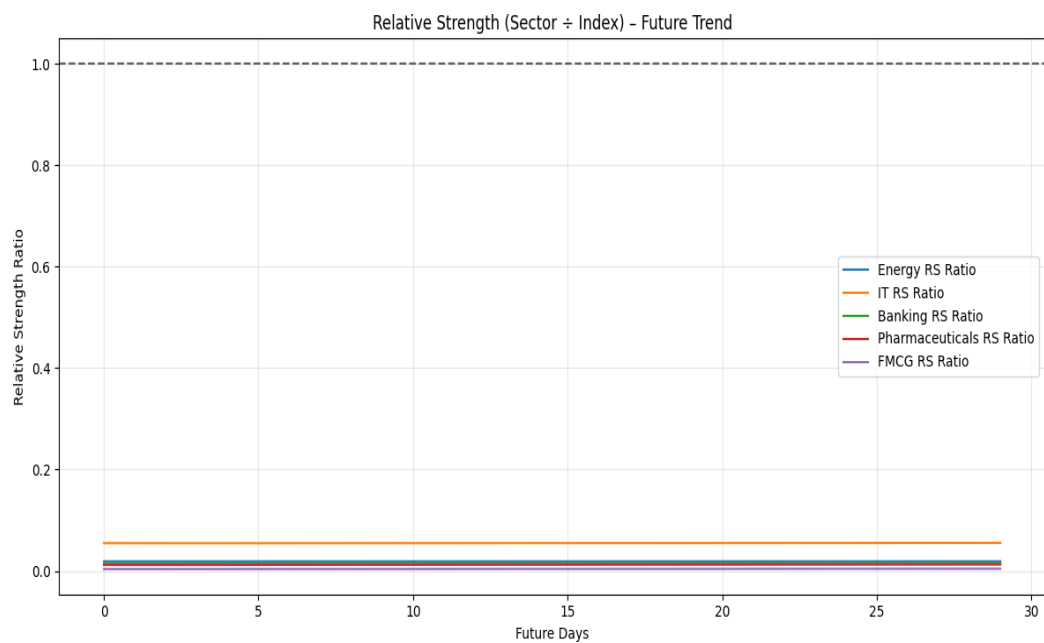- **Figure 62.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
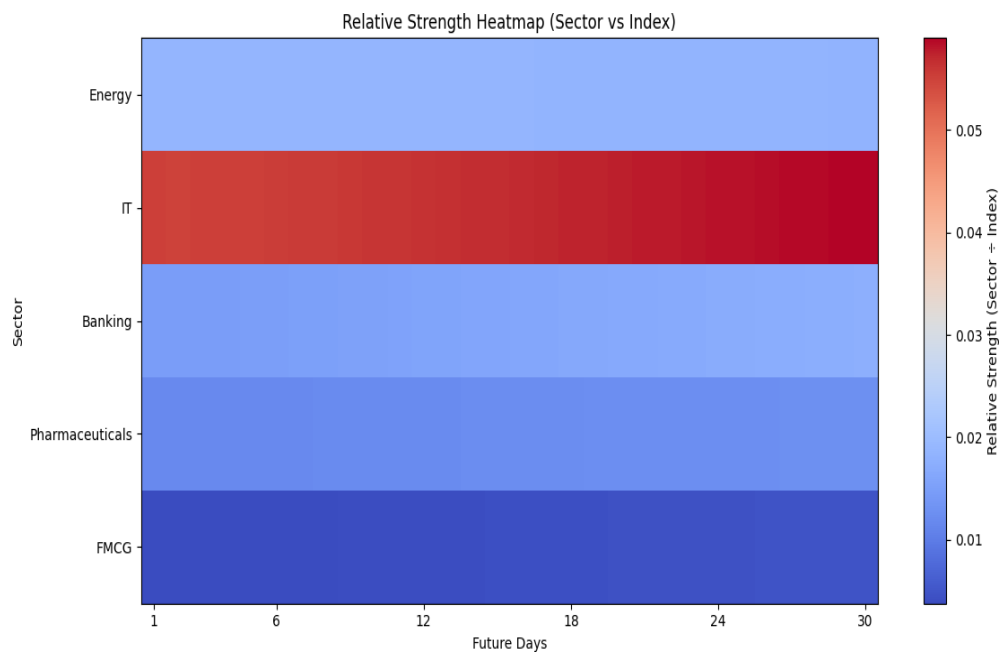
Relative Strength (Sector ÷ Index) – Future Trend

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Relative Strength Heatmap (Sector vs Index)

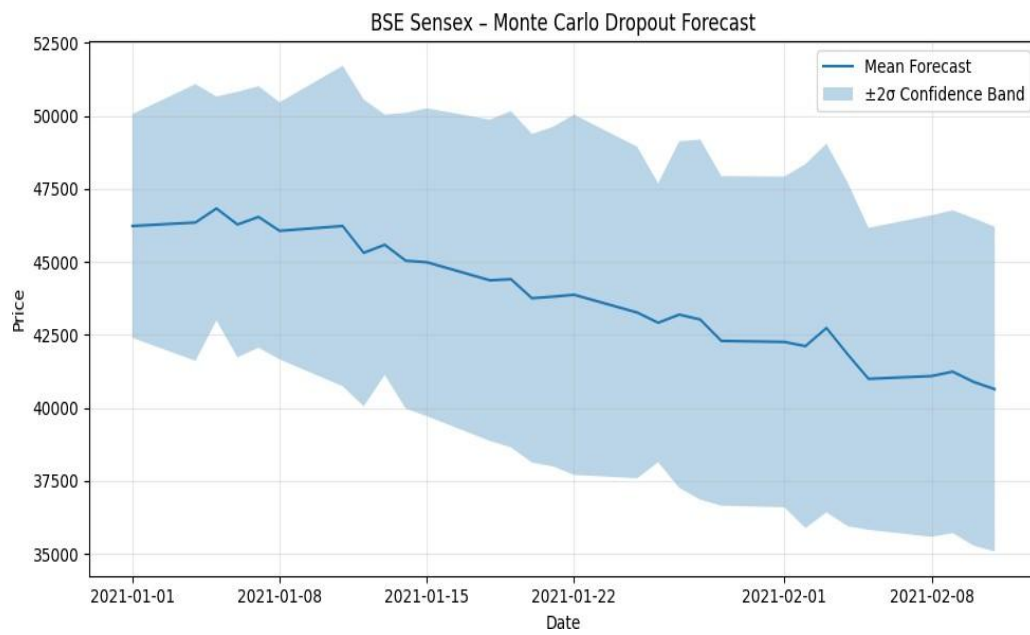- **Figure 64.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
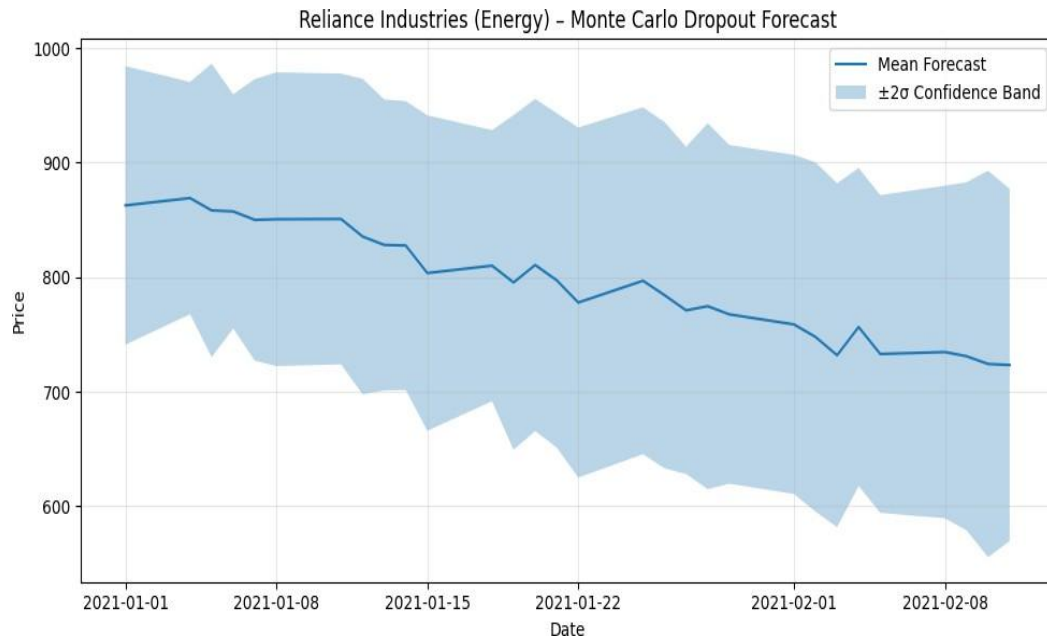
BSE Sensex – Monte Carlo Dropout Forecast

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Reliance Industries (Energy) – Monte Carlo Dropout Forecast
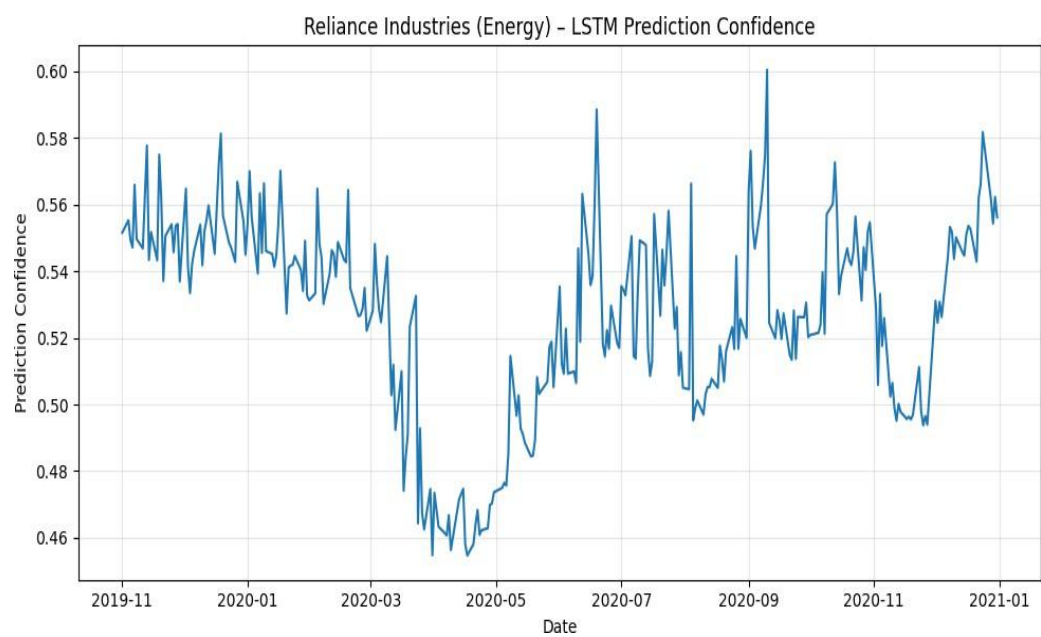
- **Figure 66.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
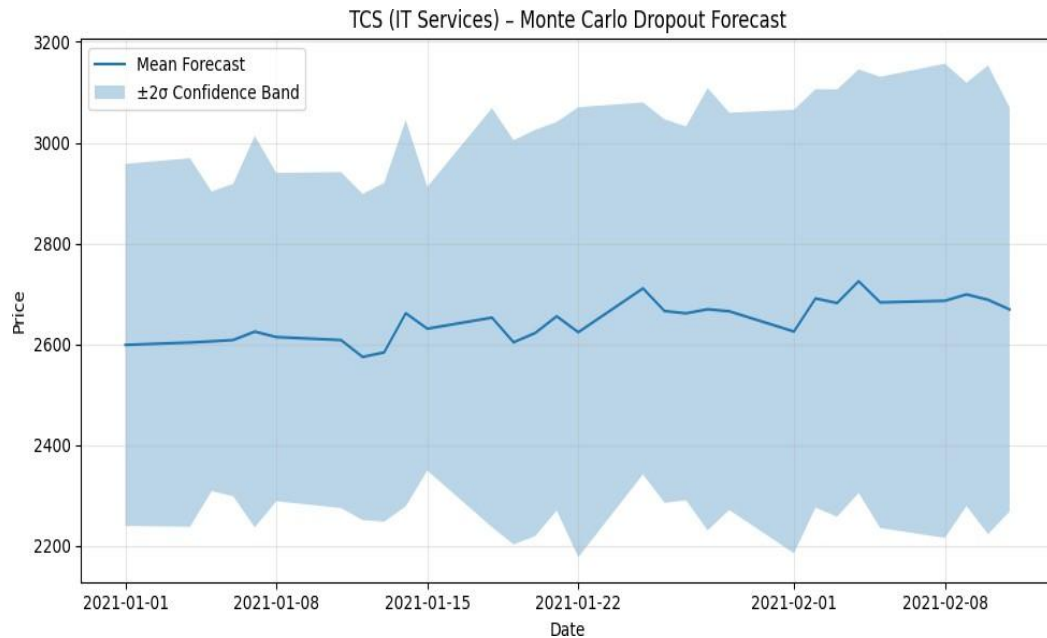
Reliance Industries (Energy) – LSTM Prediction Confidence

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

TCS (IT Services) – Monte Carlo Dropout Forecast

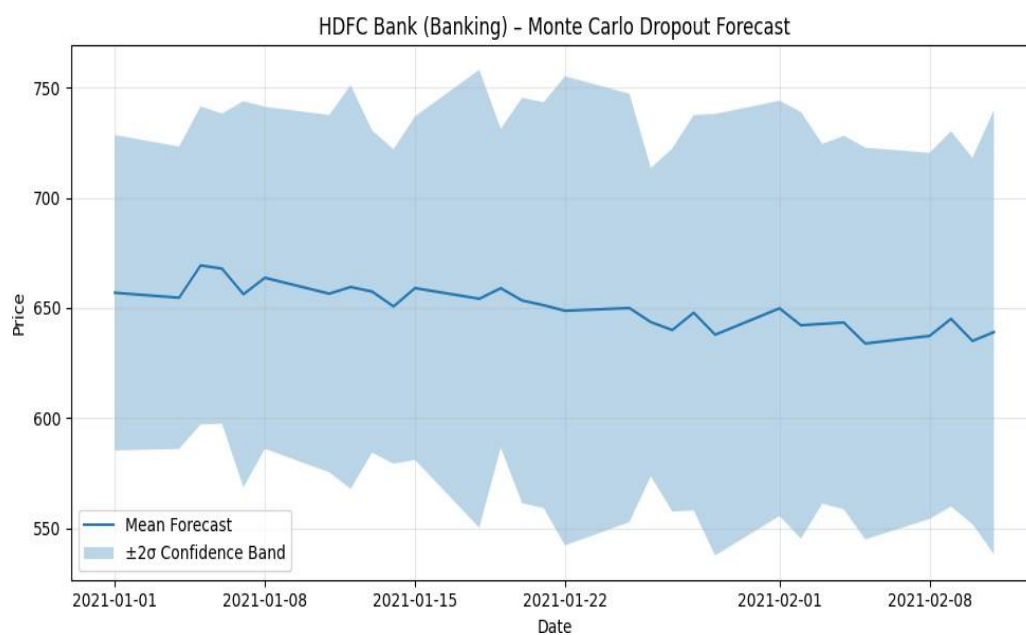- **Figure 68.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.
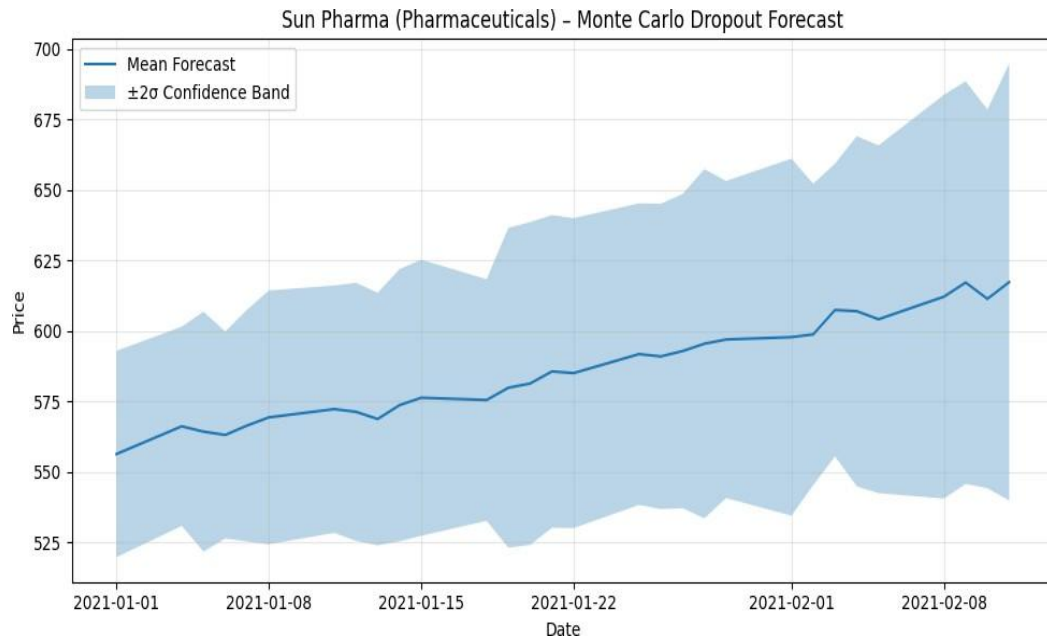
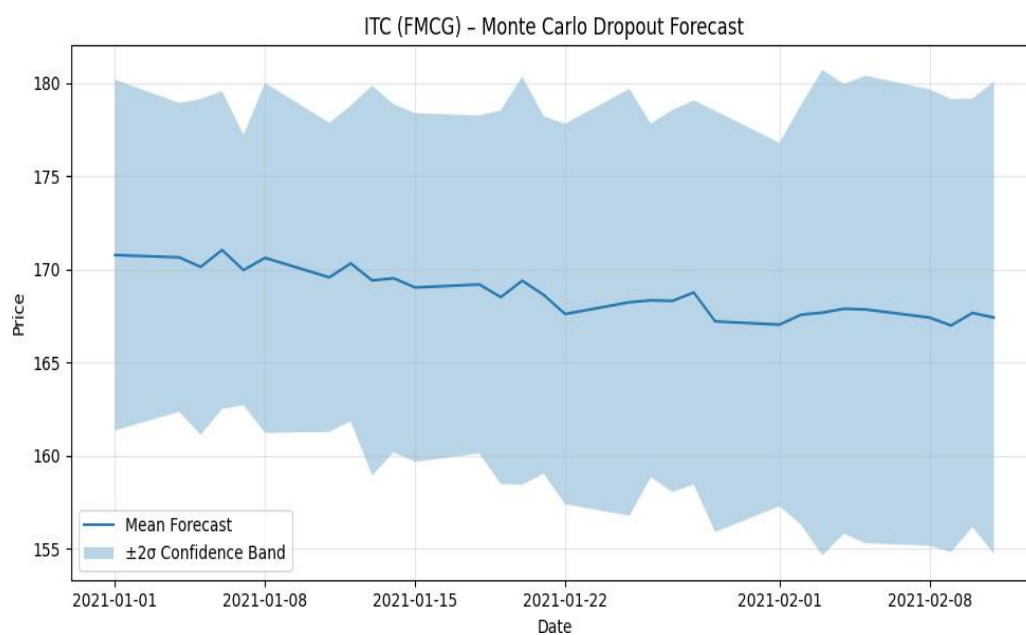HDFC Bank (Banking) – Monte Carlo Dropout Forecast

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Sun Pharma (Pharmaceuticals) – Monte Carlo Dropout Forecast
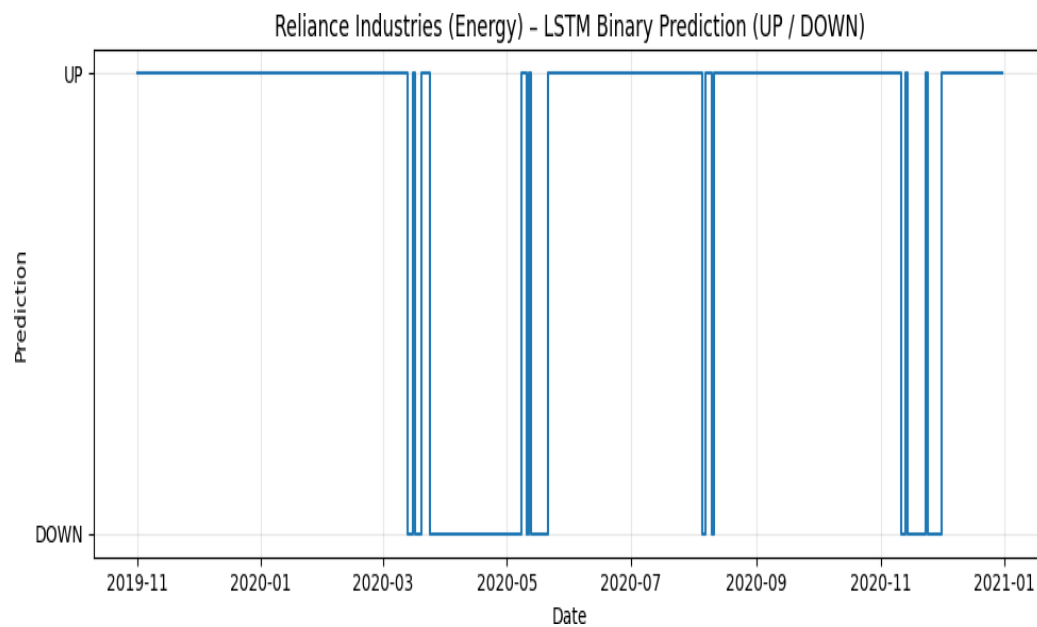
- **Figure 70.** Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

ITC (FMCG) – Monte Carlo Dropout Forecast

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Figure 72. Model Output Visualization

- This figure illustrates the behavior of the LSTM-based forecasting framework under varying market regimes. The visualization supports the presence of temporal dependency learning, regime sensitivity, and forecast uncertainty discussed in the Results section.

Reliance Industries (Energy) – Actual vs Predicted Direction