Stock Price Prediction using using LSTM with Flask Web Interface

Under the guidance of

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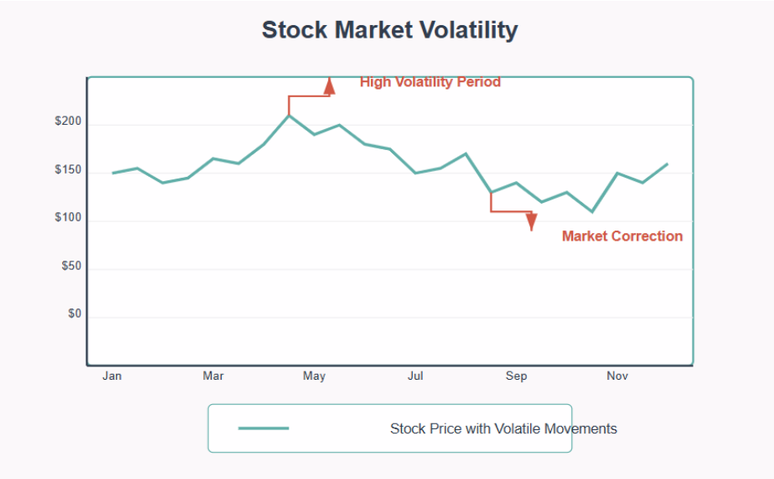
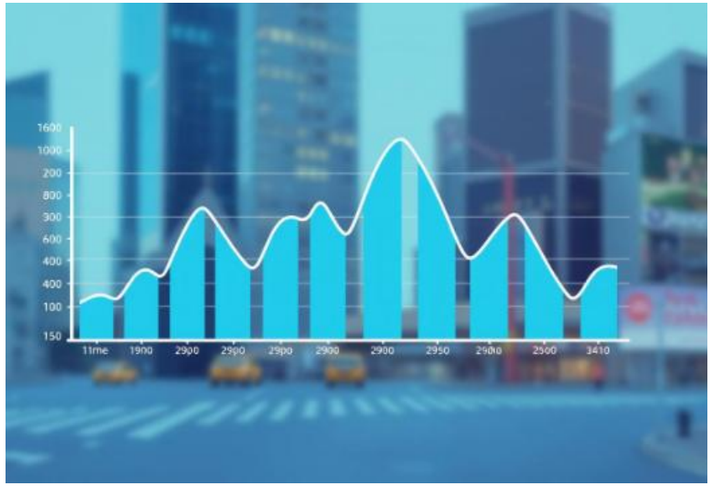
Problem, Data & Model

Problem Statement



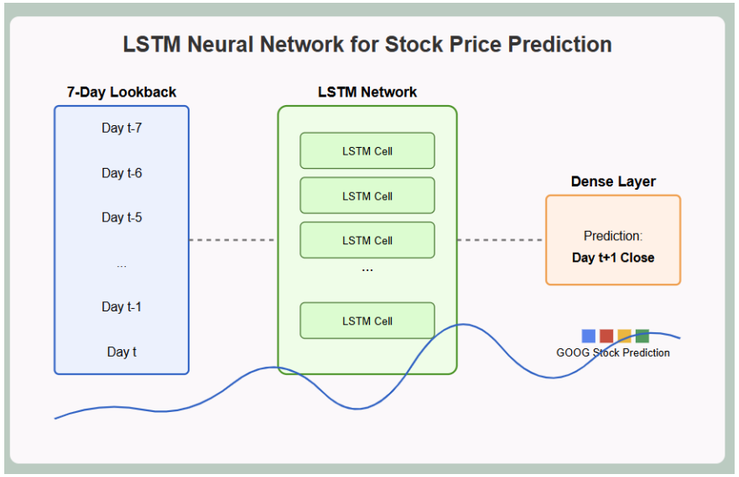
Stock markets are volatile. Prediction is crucial for investors to make informed decisions.

Data Used



Utilized the sp500_stocks.csv dataset. Contains S&P 500 stock symbols and historical prices.

Model Used



Employed an LSTM Neural Network. Well-suited for time series data analysis and forecasting.

Model Training & Workflow

1

Preprocessing

Normalized data with MinMaxScaler. Stock prices scaled between 0 and 1.

2

Training

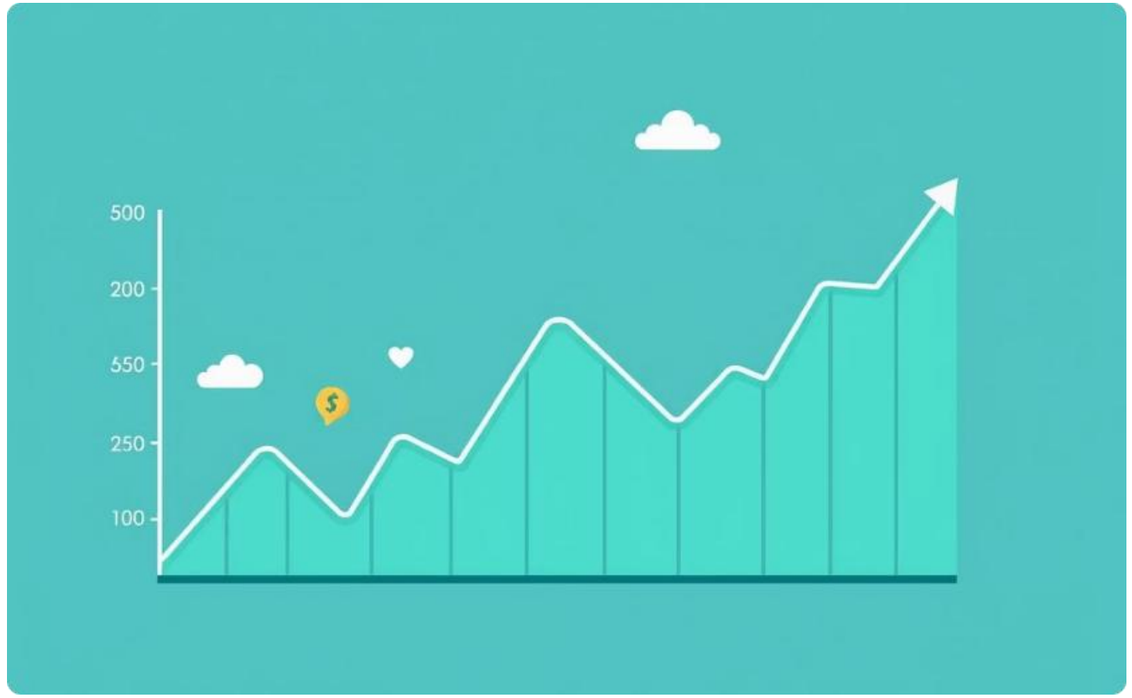
LSTM layer with 32 units. Trained for 50 epochs, batch size of 32.

3

Workflow

System checks cache for recent predictions. Generates and displays predicted stock price.

Results and Accuracy



Visuals

Training results and stock price predictions are visualized in charts.

Accuracy

Accuracy is measured by the Mean Absolute Percentage Error (MAPE).

Conclusion & Acknowledgements

User-Friendly Web Interface

The Flask-based web interface provides a simple and fast way to access stock predictions.

Successful Machine Learning Integration

The project demonstrates the successful integration of machine learning techniques for stock price prediction.

Gratitude for Guidance

Deep gratitude to Tashfeen Ahmad for his invaluable guidance and support throughout the project.

Acknowledgement to Data Providers

Special thanks to the S&P 500 dataset providers for the data used in this analysis.

Thank You

Any quesions?