

**Title: Stock Market
Prediction
Team Name: Hackers Team**

Introduction

- Ability to predict direction of stock/index price accurately is crucial for market dealers or investors to maximize their profits. Data mining techniques have been successfully shown to generate high forecasting accuracy of stock price movement.
- Various Machine Learning algorithms and models have been developed which enable us to predict the future profits and losses of individuals as well as companies.

Challenges & Limitations



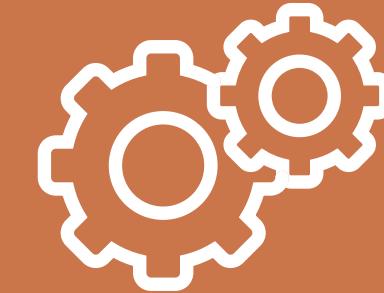
MARKET VOLATILITY :

Unpredictable changes in economic conditions.



INFORMATION ASYMMETRY:

Unequal access to corporate and market data.



ECONOMIC INDICATORS:

Influence market sentiment and volatility.

Establishment of Stock Exchanges

Stock exchanges are central marketplaces where stocks are listed and traded.

List the Companies

Companies go public through an Initial Public Offering (IPO) to list their shares on a stock exchange.

Role of Brokerage Firms

Brokers act as intermediaries between investors and the stock exchange.

How it is implemented in real world

Libraries Used

Numpy: For numerical operations.

Pandas: For data manipulation and analysis.

Matplotlib: For plotting graphs.

Sklearn: For preprocessing data (Min-Max Scaling).

Keras: For building and training the LSTM model

Predict the 'Close' prices using the trained model and transform the predictions back to the original scale.

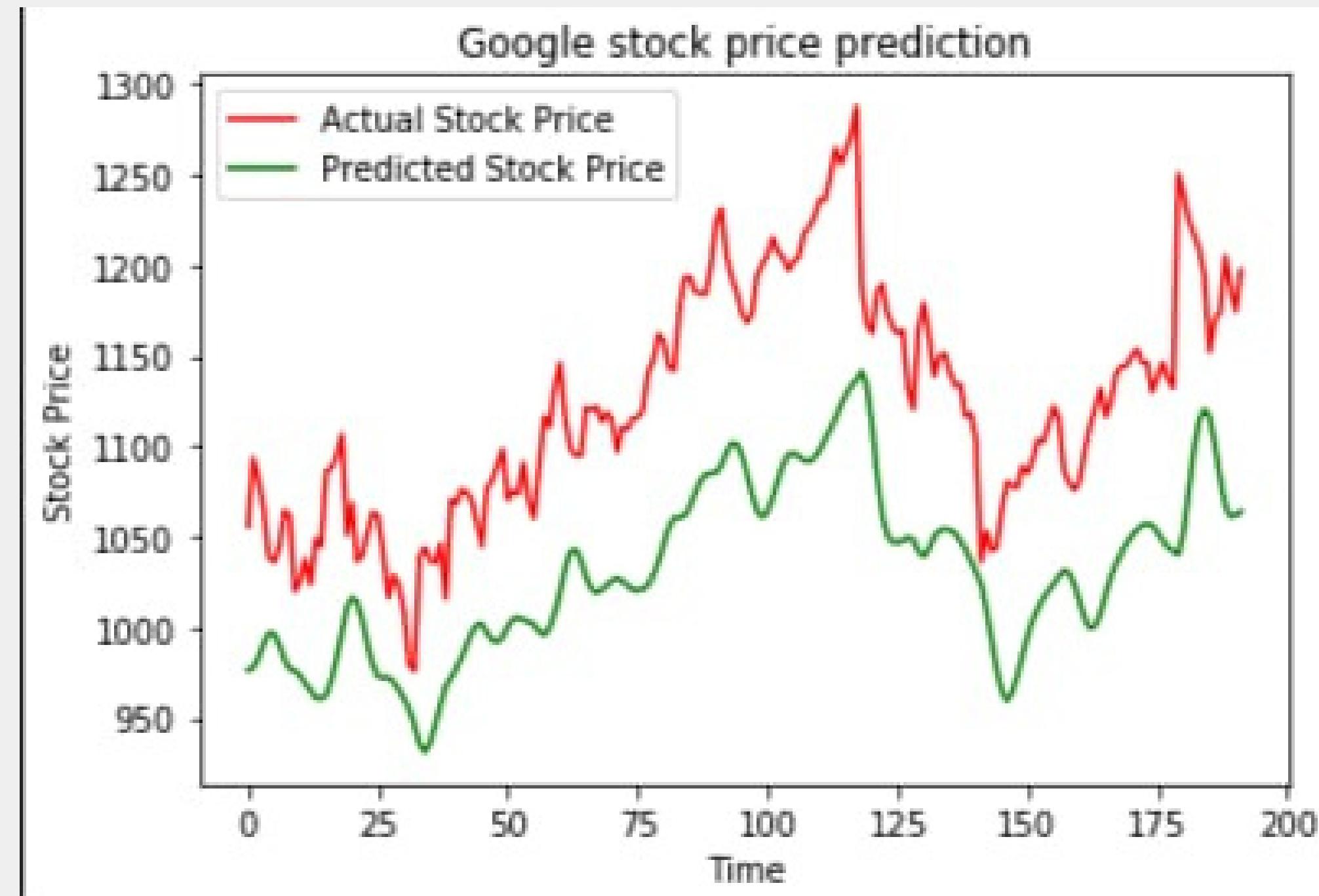
This process demonstrates the workflow of training an LSTM model to predict stock prices, from data preprocessing to model evaluation.

Front End & Back End

Front End: The code uses Matplotlib for plotting graphs.

Back End: The code uses TensorFlow as the backend for Keras, which is a high-level neural networks API.

Output:



Key Economic Indicators

Gross Domestic Product

- Description: Measures the total economic output of a country.
- Impact: Higher GDP growth indicates a strong economy, potentially boosting investor confidence and stock prices.

Inflation Rate

- Description: Measures the rate at which the general level of prices for goods and services is rising.
- Impact: High inflation can erode purchasing power and lead to higher interest rates, negatively affecting stocks.

Unemployment Rate

- Description: Percentage of the labor force that is unemployed and actively seeking employment.
- Impact: High unemployment can signal economic trouble, reducing consumer spending and company profits.

Interest Rate

- Description: Rates at which borrowers can obtain loans from financial institutions.
- Impact: Higher interest rates can increase borrowing costs for companies and consumers, potentially slowing economic growth and hurting stock prices.

Our Team

Explain targets for market growth of the company in this part.



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Aishwarya B T



Amrutha M



**Bhoomika
Subramanya**