

# Predictive Analysis of Stock Prices with LSTM



Global Market Indices			
Symbol	Price	Change	Change (%)
Dow Jones	39118.86	26.47	0.07%
NASDAQ	17732.60	-158.50	-0.89%
S&P 500	5480.48	-28.00	-0.51%
FTSE 100	8164.10	-15.60	-0.19%
Nikkei 225	39583.08	-9.93	-0.03%
Hang Seng Index	17718.61	135.42	0.77%
DAX	18235.45	23.48	0.13%
CAC 40	7479.40	-65.00	-0.86%
Euro Stoxx 50	4894.02	-15.28	-0.31%

Top 10 Volume Gainers	
Symbol	Volume Change
TATASTEEL.NS	37521949
BHARTIARTL.NS	29145832
NTPC.NS	25141039
SBIN.NS	23636388
TATAMOTORS.NS	23025267
POWERGRID.NS	21676594
ONGC.NS	19532912
ITC.NS	17866326
RELIANCE.NS	14478668
HDFCBANK.NS	13238023

Top 10 Price Gainers				Top 10 Price Losers			
Symbol	Current Price	Price Change	Price Change percentage (%)	Symbol	Current Price	Price Change	Price Change percentage (%)
DRREDDY.NS	6402.35	146.90	2.35%	MARUTI.NS	12033.85	-151.10	-1.24%
HEROMOTOCO.NS	5579.60	79.60	1.45%	BHARTIARTL.NS	1444.05	-92.20	-6.00%
DIVISLAB.NS	4596.45	74.10	1.64%	BAJFINANCE.NS	7115.55	-49.45	-0.69%
RELIANCE.NS	3130.80	68.75	2.25%	EICHERMOT.NS	4672.95	-40.85	-0.87%
ASIANPAINT.NS	2917.05	52.05	1.82%	SHRIRAMFIN.NS	2911.50	-39.55	-1.34%
SBILIFE.NS	1491.95	41.85	2.89%	APOLLOHOSP.NS	6185.70	-36.80	-0.59%
BRITANNIA.NS	5475.55	40.55	0.75%	ULTRACEMCO.NS	11667.90	-32.00	-0.27%
BAJAJ-AUTO.NS	9501.65	36.65	0.39%	ICICIBANK.NS	1199.60	-27.40	-2.23%
GRASIM.NS	2670.45	34.50	1.31%	INDUSINDBK.NS	1464.50	-26.50	-1.78%
TITAN.NS	3404.20	23.60	0.70%	KOTAKBANK.NS	1802.50	-19.70	-1.08%

The home page of "Predictive Analysis of Stock Prices with LSTM" application provides a comprehensive overview of the stock market. It includes the following sections:

#### Stock Movements Chart:

- Provides a graphical representation of stock movements for indices like Nifty 50 and Sensex.
- Allows users to visualize trends and patterns over a selected time frame.

#### Global Market Indices:

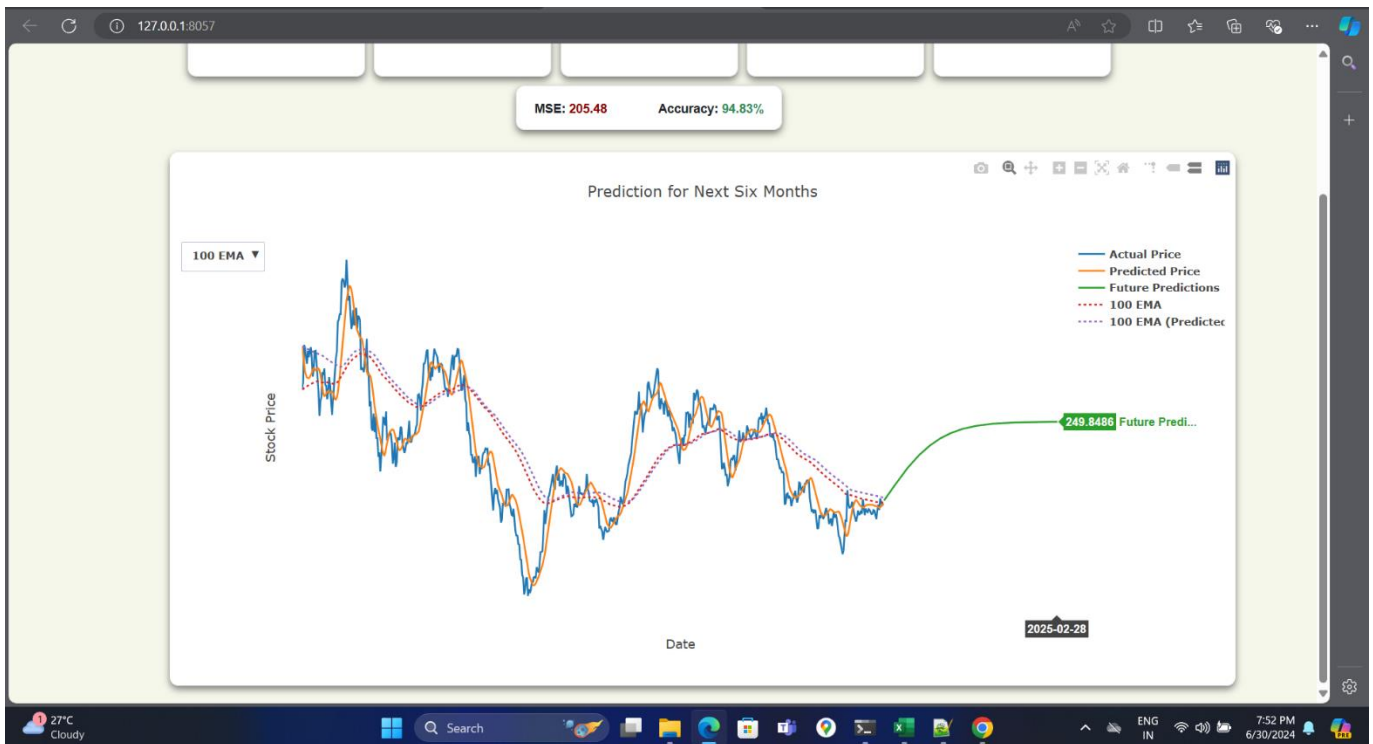
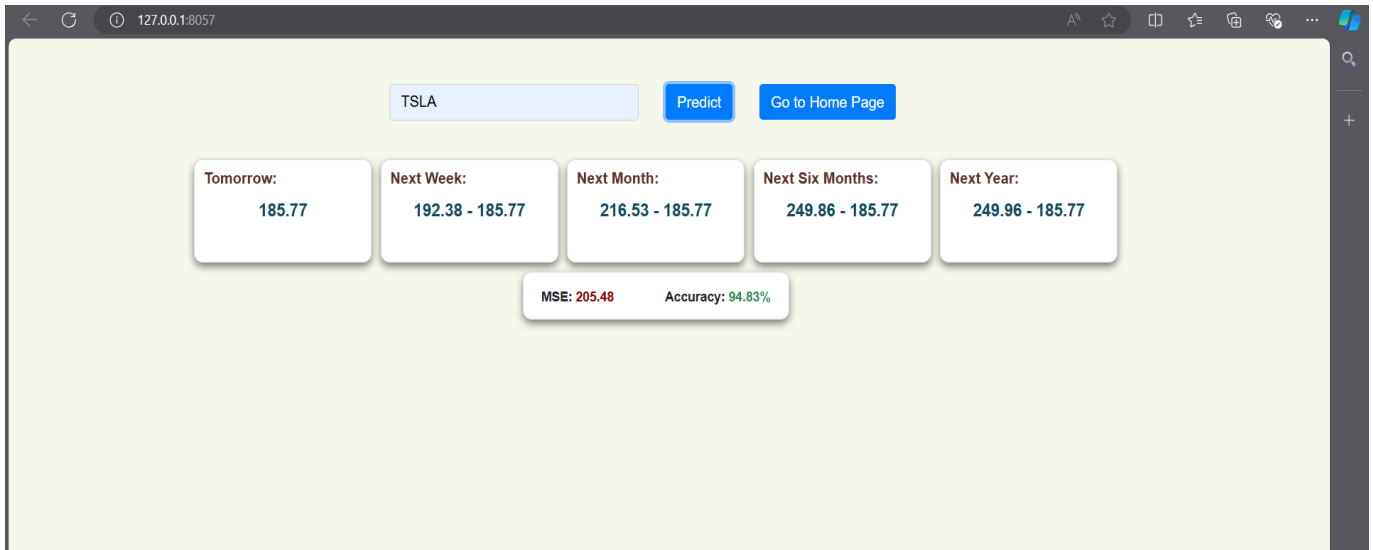
- Lists major global market indices along with their current prices, absolute changes, and percentage changes.
- Includes indices like Dow Jones, NASDAQ, S&P 500, FTSE 100, Nikkei 225, Hang Seng Index, DAX, CAC 40, and Euro Stoxx 50.

#### Top 10 Volume Gainers:

- Highlights the stocks with the highest trading volume for the day.
- Shows the stock symbol and the volume change.

#### Top 10 Price Gainers and Losers:

- Displays the top 10 stocks with the highest price increase and decrease for the day.
- For each stock, it shows the symbol, current price, price change, and percentage change.



The prediction page of the "Predictive Analysis of Stock Prices with LSTM" application provides detailed future price predictions for stocks. It includes the following sections:

#### Prediction Cards:

- Enables users to input a stock ticker symbol and generate future price predictions.
- Shows predictions for the next day, week, month, six months, and year.

- Each card displays the predicted stock price, with the Mean Squared Error (MSE) and accuracy of the model provided for reference.
- Selecting a prediction card updates the corresponding chart to reflect detailed predictions over the specified period.

**Prediction Chart:**

- Displays a graphical representation of the stock price predictions for the next six months.
- Includes actual prices, predicted prices, and future predictions, with the option to visualize the 100-day Exponential Moving Average (EMA) for both actual and predicted prices.
- Allows users to toggle the visibility of EMA lines through a dropdown menu.