GENERAL ELECTRIC (GE)

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Company Overview:

General Electric (GE) is an American multinational company that is best known for Power, Renewable Energy, Aviation and Healthcare industries. GE has been a publicly traded company. It is now traded on the New York Stock Exchange, where GE stock can be bought or sold.

- Founder : Charles A. Coffin; Thomas Edison; J. P. Morgan
- Headquarters : Boston, Massachusetts, U.S.
- Founded : 1892
- Industry : Computers, aviation, power, renewable energy, digital industry, additive manufacturing and venture capital and finance.
- Total Employees : 172,000 (as per 2022 Annual Report)
- Countries : More than 170 countries, and have invested in emerging markets for more than 100 years.
- Mission / Purpose Statement : "We rise to the challenge of building a world that works."

GE businesses are: **GE Aerospace, GE HealthCare, and GE Vernova**. The new businesses will be concentrated in the fields of aerospace, healthcare, and energy (including digital, renewable, and electricity). According to gross sales, GE was the 33rd-largest company in the United States according to the Fortune 500 in 2020. GE was the 14th most profitable business in the Fortune 20 in 2011, but when its profitability declined, it very significantly underperformed the market (by nearly 75%). $18 BILLION contributed to U.S. Gross Domestic Product (GDP)

Price Prediction:

- GE Closing Stock Price as of 11/20/2023 : $120.07
- GE Predicted Closing Stock Price on 12/12/2023 : $117.05957
- As per the model, the price on 12/12/2023 will decrease by 2.5% i.e. $117.05957.

Analysis:

We employed Long Short- Term Memory (LSTM) network as training methodologies to analyze its effectiveness in forecasting the stock price of GE from 01/01/2015 to 11/17/2023.

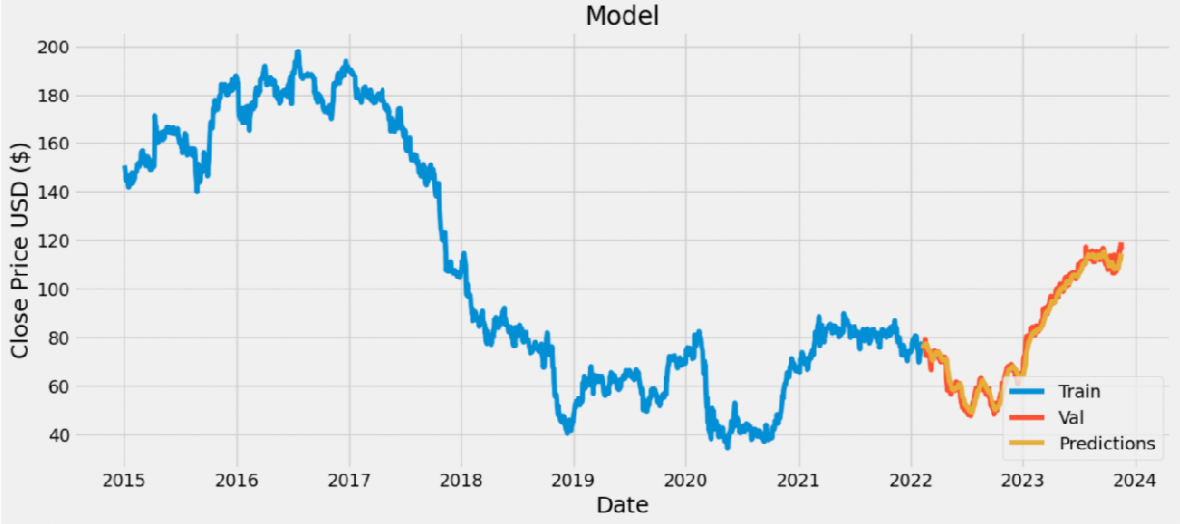
i. Libraries used:

- import math
- import pandas_datareader as web
- import numpy as np
- import pandas as pd
- from sklearn.preprocessing import MinMaxScaler
- from keras.models import Sequential
- from keras.layers import Dense, LSTM
- import matplotlib.pyplot as plt
- plt.style.use('fivethirtyeight')

ii. Data Extraction: Yahoo Finance Library

iii. Training of Data: LSTM Model; Neural Network - (50 neurons to training data, 50 neurons to testing data)

- model = Sequential()
- model.add(LSTM(50, return_sequences=True, input_shape= (x_train.shape[1], 1)))
- model.add(LSTM(50, return_sequences=False)
- model.add(Dense(25))
- model.add(Dense(1))



iv. Model Accuracy:

RSME=0.341 (almost 100% accurate)

Date	Close	Predictions
2022-02-08	77.525368	75.456291
2022-02-09	77.478531	76.042534
2022-02-10	77.119438	76.504539
2022-02-11	75.589386	76.811653
2022-02-14	75.409836	76.832329
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2023-11-10	115.269997	110.627876
2023-11-13	115.519997	111.509140
2023-11-14	117.250000	112.389389
2023-11-15	116.300003	113.371536
2023-11-16	118.940002	114.177948