LSTM: Stock Market Prediction

Input Data

Overview

In this project we have used the concepts of **LSTM**(Long short term memory) and **RNN**(Recurrent Neural Networks) and tried to propose a model that predicts the opening price for a stock using the LSTM algorithm.

DataSet

We have imported our dataset from Yahoo Finance(https://in.finance.yahoo.com/).

We have used the stock of **Google**(symbol: **GOOG**) to train our model (https://in.finance.yahoo.com/quote/GOOG?p=GOOG).

The **parameters** that were imported were:

Date: The date of the instance of the stock

Open: The opening price of the stock for that particular day

High: The highest price achieved by the stock for that particular day

Low: The lowest price achieved by the stock for that particular day

Close: The closing price of the stock for that particular day

Adj close: The adjusted closing price of the stock for that particular day

Volume: The volume of the stock

The Dataset imported was from **20th August 2004 to 31st December 2020**. The downloaded csv file can be seen here:
https://github.com/samyakgoyal/Stock-Prediction-Using-LSTM/blob/main/GOOG.csv

We divided the dataset in **chunks of 90 days** and then trained the model on them.

The **training was done on the data from 20th August 2004 to 31st December 2018**, **the testing was done on the data from 1st January 2019 to 31st December 2020**.

First of all, the columns Date and Adj close were dropped since they were not providing any additional information.

Then the remaining features were scaled using MinMaxScaler imported from sklearn.preprocessing.

Then the dataset was broken into chunks of 90 days and then the model was trained to predict the opening price for the stock.