ARTIFICIAL INTELLIGENCE

STOCKMARKET PREDICTION SYSTEM

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Contents

[Introduction 2](#_Toc60511118)

[ABSTRACT 3](#_Toc60511119)

[Prediction Concept 3](#_Toc60511120)

[What Stock market is 4](#_Toc60511121)

[Importance of stock market 4](#_Toc60511122)

[Stock Market Predictions 4](#_Toc60511123)

[False prediction 4](#_Toc60511124)

[Conditions because of which predictions can be false 4](#_Toc60511125)

[Methodology 5](#_Toc60511126)

[Linear Regression 5](#_Toc60511127)

[LSTM (Long short-term memory) 5](#_Toc60511128)

[TOOLS 6](#_Toc60511129)

[Conclusion 6](#_Toc60511130)

# Introduction

Stock market prediction is certainly a difficult undertaking due to the fact do’s and don’ts are very applicable issue on this connection. Pulling out profit from stock marketplace prediction at the moment are genuinely possible with the advent of artificial intelligence thru which researchers may additionally strive with different strategies In reference to economic records which substantially performs a essential position for generating an awesome selection on the idea of the available benchmarks. AS an investor it’s a bold assignment to totally depend upon a brand-new technology like Artificial Intelligence (AI) for the prediction of stock market. Stock trading ability can be computed with economic commercial enterprise out of the available assets that is primarily based on monetary records. Fear, greed, threats, and all different human emotions shall never play any sort of role at the same time as predicting stock market trends within the case of Artificial Intelligence (AI). Algorithmic technique for growing A complete package deal based at the predictions as well as preceding facts evaluation at the moment are trending Only due to the fact the system dependency of humans. Virtually infinite opportunities for acquiring increasingly profits out of the invested cash are the high concerns of an individual’s and that is what AI now are doing with algorithmic trading.

## ABSTRACT

Artificial Intelligence has advanced impressively on account that inventors started out tampering with its capability. Many consider that the subsequent tremendous use for AI era could be in the field of financial market hypothesis. technology may be used both to make our lives higher or make cash. The stock alternate marketplace is the most volatile and most dynamic of all. unique care must be exercised in shopping for and selling of shares from different businesses or companies. The chance of losing the stocks and acquiring blessings via the shares are fifty-fifty. Volatility of the stock market jumbles up a trader’s frightened device making it hard to recognize or thin rationally. Artificial Intelligence is meant to be a predictive version that appears at extra than technical patterns of trading. It has the capability to perceive monetary capabilities of companies for e.g., price to profits ratio, long time business loans. so one can make cash ultimately. This calls for capabilities from special areas of study and huge computational energy which is why it's far simplest generic in current years. This project tries to try of developing with a basis and prediction the usage of artificial Intelligence in figuring out buying and selling pattern relations which accurately interrelates with high Frequency stock buying and selling primarily based on pre-set standards.

# Prediction Concept

The possible market prediction goal may be the future stock rate or the volatility of the expenses or market trend. The usage of this prediction developer holds two exceptional varieties of predictions like Dummy and actual time predictions i.e., used in stock market system. In Dummy prediction we outline some policies and are predict the future of stocks by way of calculating common fee.

# What Stock market is

This is a place where buying and selling of a share take place for listed companies. Stock exchange is basically a bridge between buyers and sellers of the shares*.*

## Importance of stock market

* It helps companies to improve their financial condition.
* Help individuals to create personal wealth.
* It serves as a symbol of states economic status.
* Increase investment.

## Stock Market Predictions

It helps to determine the future value of any company stock and other financial issues.

# False prediction

It is possible for a program to predict wrong because it is not working on real time it is based on previous records so it might be possible that on the time of prediction share price of a xyz company is high as per system prediction according to previous record but on ground the reality might be different.

# Conditions because of which predictions can be false

* Country’s financial condition at the time of record gathering and at the time of prediction.
* Market environment at the time of records collection and at the time of prediction making.
* Country’s overall situation of peace.
* The condition of a company financial status is most important for accuracy because if the financial condition of a company was good at the time of record gathering and now at the time of prediction it becomes poor than our program is working on the basis of records so it will predict company’s share prices will go up but according to ground realities it will go down. So, the marketing sense of a trader is also important because our system can only predict according to previous facts and figures it does not work on real time.
* Many other reasons.

# Methodology

## Linear Regression

In this project linear regression is used as a supervised learning algorithm to predict the results of a contribution. Regression lines gives the predict results such as shares sold based on a given features.

It is a very powerful statistical technique used for solving machine learning problems. It can be used to predict the total revenue of the organization and also predict the total unit expected to be sold for a certain product. The regression line gives the predicted result i.e., unit sold based on a input features the formula is as following

Y=MX+C

Where m is slope of the line regression and c is the intercept of the regression line.

## LSTM (Long short-term memory)

The second methodology which is used in this project is LSTM.

LSTM stands for Long Short-Term memory. It is building block of a neural network (like perceptron). LSTM blocks are used to build a recurrent neural community. An RNN is a sort of neural network wherein the output of a block is fed as enter to the subsequent iteration. An LSTM block consists of 4 main additives: a cell, an enter gate, an output gate and a forget gate. The cell is accountable for "remembering" values over arbitrary time durations; consequently, the phrase "memory" in LSTM. Each of the three gates can be idea of as a "conventional" synthetic neuron, as in a multi-layer (or feedforward) neural community: that is, they compute an activation (the usage of an activation feature) of a weighted sum. Intuitively, they can be concept as regulators of the float of values that goes thru the connections of the LSTM; therefore, the denotation "gate". There are connections between those gates and the cell. Some of the connections are recurrent, a few them are not.

# TOOLS

This project is programed on python programming language with different libraries like panda and some others it contain different data sets for predictions and other functions.

# Conclusion

Our project is based on artificial intelligence and programed on python programming language the goal of this project is to predict about ups and downs of stock market with respect to previous records it is working on multiple datasets. This program can be predicted false because it is not working on real time. It is working on a history-based records so it cannot be 100 percent accurate all the time sometimes shares prices may vary according to country’s economic conditions, environment of the market and other circumstances also influence on the stock market.