

# Stock Prediction System using ML

<sup>1</sup>Rahul Agarwal, <sup>2</sup>Priya Gupta, <sup>3</sup>Er. Shilpi Khanna

*1-Student, Information Technology, Shri Ram Swaroop Memorial College of Engg. & Management, Lucknow, India.*

*2-Student, Information Technology, Shri Ram Swaroop Memorial College of Engg. & Management, Lucknow, India.*

*3-Assistant Professor, Information Technology, Shri Ram Swaroop Memorial College of Engg. & Management, Lucknow, India*

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## ABSTRACT

A stock market prediction is described as an action of attempting to classify the future value of a company's stocks or other financial investments traded on stock exchanges. The stock market allows investors to own shares of public companies through trading either by exchange or over the counter markets. This project aims to develop software for stock prediction using various ML techniques. The objective of making this project called "Stock Prediction System using ML" is to predict the future prices of stocks. In the past few years, some forecasting models have been developed for this kind of purpose, and they have been applied to stock market prediction.

**KEYWORDS:** Machine Learning, Stock Prediction, NSE, BSE, cryptocurrency.

are present in the market but none of them can't provide the feature of stock prediction.

Investors are familiar with the saying, "buy low, sell high" but this does not provide enough context to make proper investment decisions. Before an investor invests in any stock, he/she needs to be aware of that how the stock market behaves. Investing in a good stock but at a bad time can have disastrous results, while investment in a mediocre stock at the right time can bear profits. Financial investors of today are facing this problem of trading as they do not properly understand as to which stocks to buy or which stocks to sell in order to get optimum profits. Predicting long term value of the stock is relatively easy than predicting on day-to-day basis as the stocks fluctuate rapidly every hour based on world events.

The solution to this problem demands the use of tools and technologies related to the fields of machine learning and data prediction. The application will predict the stock prices for the next trading day. The requirements and the functionality of this application correlates it to the class.

## I. INTRODUCTION

A stock prediction system using Machine Learning is a system that predicts the prices of almost all the shares of Indian Stock Market. The majority of trading in the Indian stock market takes place on two stock exchanges, namely the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE) which are the two largest stock exchanges in the country. The Sensex and Nifty are the two prominent Indian market indices. Since the prices in the stock market are dynamic, the stock market prediction is complicated. This software also provides the platform for buying/selling of shares. Now a day's there are various stock brokers

## II. PROPOSED WORK

We are predicting the future prices of various stocks depending upon the datasets that we have used in making our project. Also, the user can create his/her account on our website for making any predictions or purchases of stocks. We have used Machine Learning algorithms like CNN, RNN and LSTM etc.

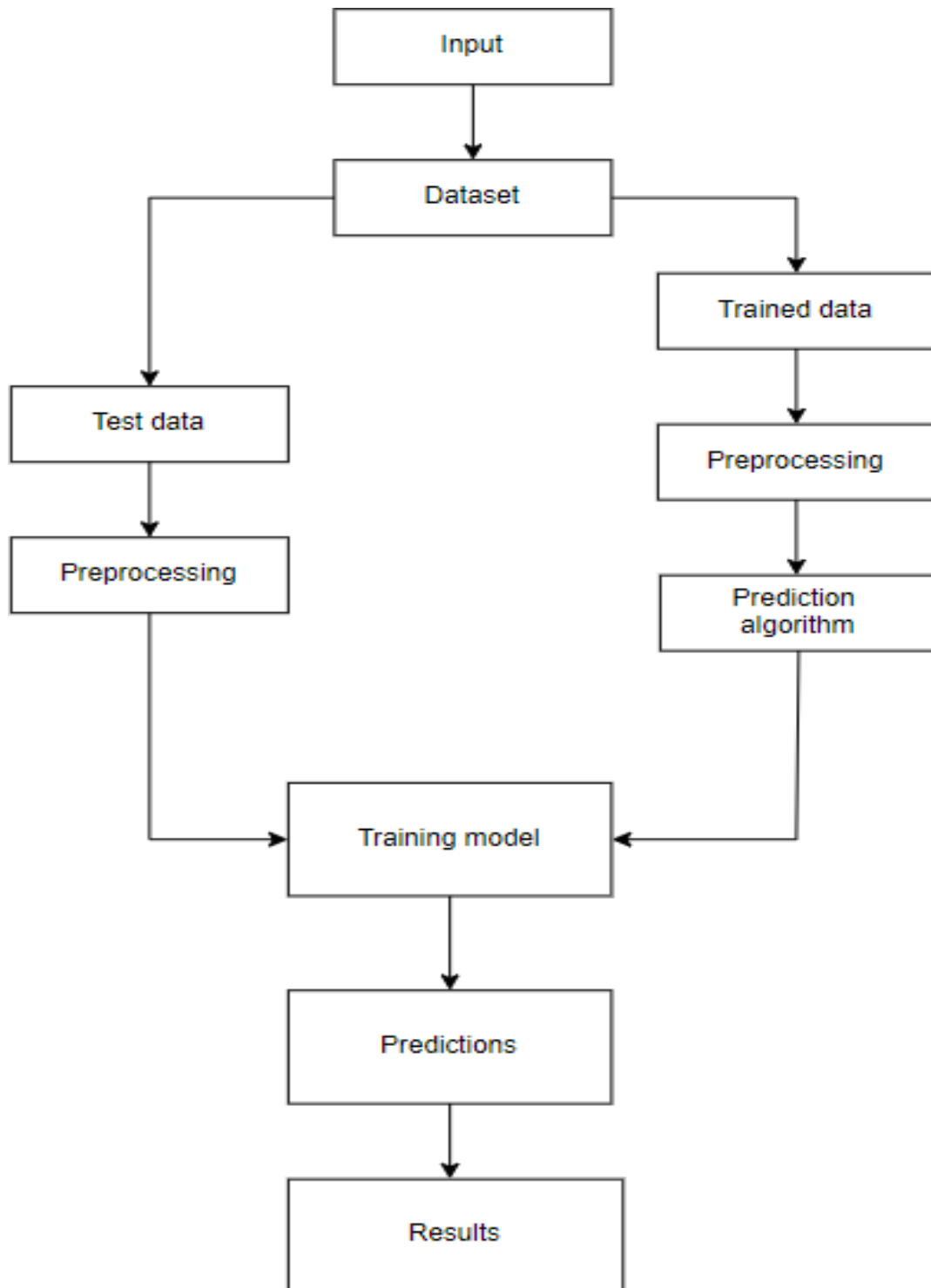


Fig I: Block Diagram

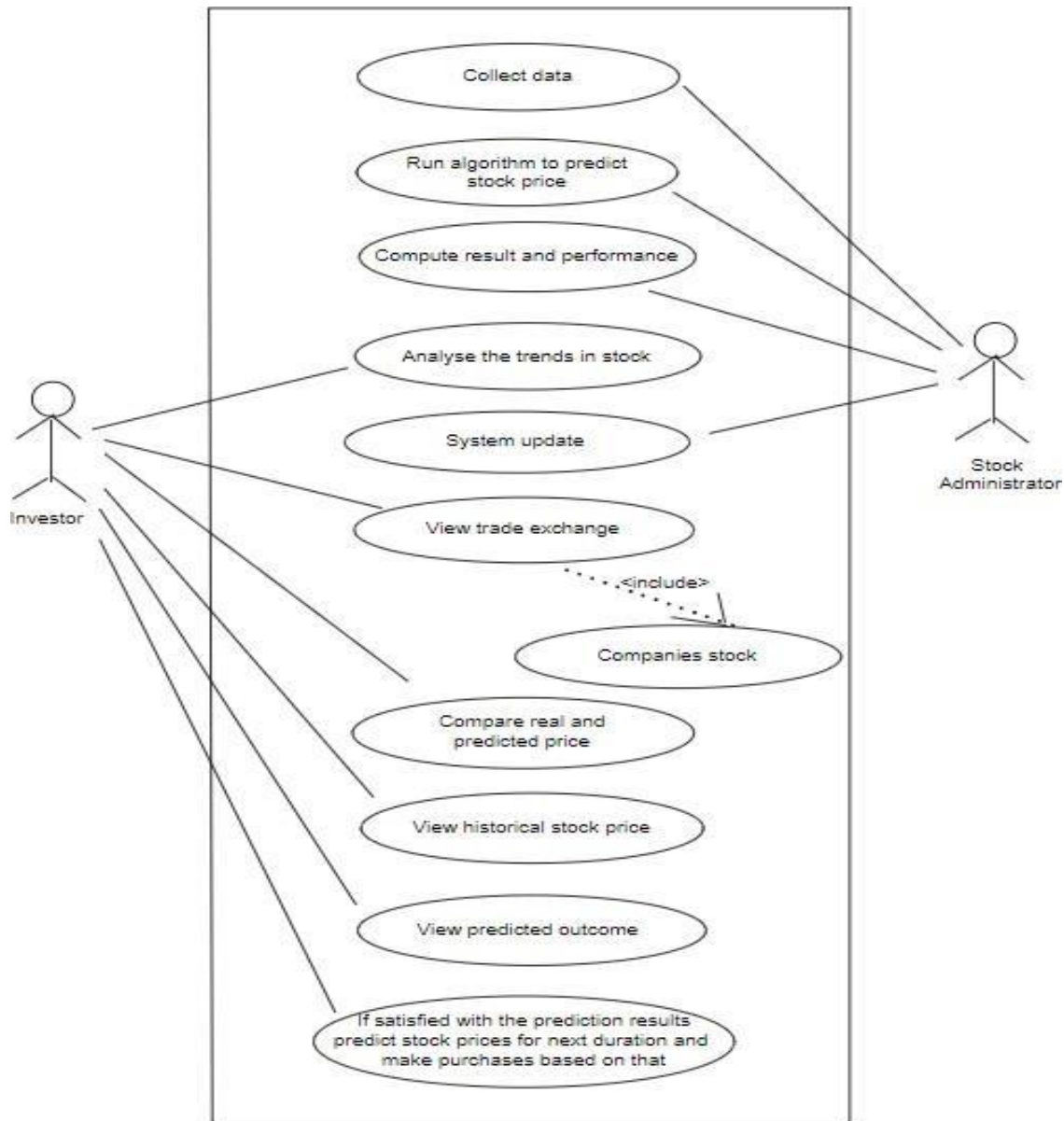


Fig II: UML Diagram

Description of modules are mentioned below:

**A. Account:**

It provides a very extensible infrastructure for dealing with user accounts.

**Features**

Functionality for:

- Log In
- Sign up
- Password reset

**B. Services:**

This module provides a bundle of services like account creation, predicting their future prices, etc.

**C. Search:**

This module provides user to search the desired stock from our database.

**D. Feedback:**

This module provides user a option to give his/her feedback on the services provided by our system. By using this feedback, we can improve our services.

**III. CONCLUSIONS:**

Stock prediction system using machine learning is very much useful in everyone's day to

day life who are interested in stock market because it predicted the prices and using this prediction the traders can take their decision to buy the respective stock or not by viewing their future trend. The prediction Engine provides optimal performance with the right dataset and efficient training of the ML models from the past experiences.

**Future Work:**

1. Taking global economic trends into account.
2. We can extend this application for predicting cryptocurrency trading.
3. We can add sentiment analysis for better analysis.
4. For better accuracy model can be trained with more varied and detailed data. Also, other algorithms along with proposed can be used to create a new hybrid model.

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