STOCK MARKET PREDICTION USING MACHINE LEARNING

A MAIN PROJECT REPORT

submitted by,

LEKSHMI .S

BMC19CSCE05

to

the APJ Abdul Kalam Technological University

In partial fulfillment of the requirements for the award of the Degree

of

Master of Technology

In

Computer Science and Engineering

Department of Computer Science and Engineering

Baselios Mathews II College Of Engineering

Lake View, Muthupilakadu, Sasthamcotta – 690 520, Kollam, Kerala.

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DECLARATION

I undersigned hereby declare that the project report **"Stock market Prediction using machine learning"**, submitted for partial fulfillment of the requirements for the award of degree of Master of Technology of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by me under the guidence of Mrs. Deepa Rajan S, Assistant Professor, CSE Department and supervision of Mr. Sam G Benjamin, Assistant Professor, CSE Department. This submission represents my ideas in my own words and where ideas or words of others have been included, I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree, diploma or similar title of any other University.

Sasthamcotta

21-06-2021

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CERTIFICATE

This is to certify that the project report entitled **"Stock market Prediction using machine learning"** submitted by **"Lekshmi S"** to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the Degree of Master of Technology in Computer Science and Engineering is a bonafide record of the project work carried out by her under my guidance and supervision. This report in any form has not been submitted to any other University or Institute for any purpose.

Internal Supervisor

External Supervisor

Project Coordinator

HEAD OF THE DEPARTMENT

ACKNOWLEDGEMENT

First of all I thank the God Almighty for His grace and blessings that enabled me in the successful completion of my project.

I am extremely thankful to the Management for providing me infrastructural facilities to work in, without which this work would not have been possible.

I express my sincere thanks with high esteem and gratitude to the Principal **Prof. Dr. L. PADMA SURESH** for his timely help and allowing me to utilize the facilities for the successful presentation of my preparation of project report.

I privileged to place on record our profound sense of gratitude and appreciation to **Dr.Radhakrishnan.B,** Head of Department, Department of Computer Science & Engineering, for his generous guidance, help and constructive suggestions.

I heartedly announce my ardent and earnest thankfulness to my project guide **Mrs. Deepa Rajan S,** her tutelage and inspiration was the leading factor in transforming my efforts to fruition. Her practical and perspective visualization has shown light on the trail to triumph.

My honest gratefulness goes to my project coordinator **Mr. Sam G Benjamin,** as well, for his precious support offered during the course of development of the project.

It's my delight to disseminate my heartfelt thanks to the faculty members of Department of Computer Science and Engineering for their insightful comments and constructive suggestions to perk up the quality of my work.

I bow down with indebtedness and a great deal of exhilaration the vital role of technical personnel who have prearranged all necessary paraphernalia for the victorious development of my project.

Finally yet importantly, i shall put into words my courtesy and admiration to my friends and relatives for their stimulating suggestions and encouragement.

LEKSHMI S

ABSTRACT

STOCK MARKET PREDICTION USING MACHINE LEARNING

In a financially volatile market, as the stock market, it is important to have a very precise prediction of a future trend. Because of the financial crisis and scoring profits, it is mandatory to have a secure prediction of the values of the stocks. Predicting a non-linear signal requires advanced algorithms of machine learning .During the process of considering various techniques and variables that must be taken into account, and then found out that techniques like linear regression, support vector machine were not exploited fully. Here it present and review a more feasible method to predict the stock movement with higher accuracy. The first thing it have taken into account is the dataset of the stock market prices from previous year. The dataset was pre-processed and tuned up for real analysis. Hence, here also focus on data pre-processing of the raw dataset. Secondly, after pre-processing the data, it will review the use of support vector machine and logistic regression on the dataset and the outcomes it generates. In addition, the proposed system examines the use of the prediction system in real-world settings and issues associated with the accuracy of the overall values given. Here it also presents a machine- learning model to predict the longevity of stock in a competitive market. The successful prediction of the stock will be a great asset for the stock market institutions and will provide real-life solutions to the problems that stock investors face

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LIST OF ABBREVIATION

ML	Machine Learning
ETL	Extract, Transform, Load
EDA	Exploratory Data Analysis
SVM	Support Vector Machine
DBSCAN	Density-Based SpatialClustering of Applications with Noise
BIRCH	Balanced Iterative Reducing and Clustering using Hierarchies
TD	Temporal Difference
KNN	K-Nearest-Neighbours

CHAPTER 6

CONCLUSION

Stock market prediction is the act of trying to determine the future value of a company stock or other financial instrument traded on an exchange. The successful prediction of a stock's future price could yield significant profit. From the literature survey, we found that the most suitable algorithm for predicting the market price of a stock based on various data points from the historical data is the support vector machine and logistic regression. The algorithm will be a great asset for brokers and investors for investing money in the stock market since it is trained on a huge collection of historical data and has been chosen after being tested on a sample data. The project demonstrates the machine learning model to predict the stock value with more accuracy as compared to previously implemented machine learning models. Future scope of this project will involve adding more parameters and factors like the financial ratios, multiple instances, etc. The more the parameters are taken into account more will be the accuracy.

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