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Stock Prediction Model Using TensorFlow

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***Abstract:** In Stock Market Prediction, the aim is to predict the future value of the financial stocks of a company. The recent trend available in market prediction technologies is that the use of machine learning that makes predictions on the basis of values of current stock exchange indices by training on their previous values. Machine learning itself employs completely different models to create prediction easier and authentic. The paper focuses on the use of Regression and LSTM based Machine learning to predict stock values. Considering the factors are open, close, low, high and volume.*
***Keywords:** Stock Prediction, Machine Learning, Data Visualization, Yahoo Finance Dataset*

I. INTRODUCTION

A correct prediction of stocks will cause immense profits for the vendor and also the broker. Frequently, it's brought out that prediction is chaotic instead of random, which implies it will be foretold by fastidiously analyzing the history of the various securities market.

Machine learning is associated with economical thanks to representing such processes. It predicts a price market price value on the brink of the tangible value, thereby increasing the accuracy. The introduction of machine learning to the world of stock prediction has appealed to several researchers as a result of its economical and correct measurements. The very important part of machine learning is that the dataset used.

Throughout this project, supervised machine learning is used on a dataset obtained from Yahoo Finance. The model is then taken a look at on the test knowledge. LMS and LSTM models area units engaged for this conjecture on an individual basis. Finally, the graphs for the fluctuation costs of costs with the dates (in the case of LMS based model) and between actual and foretold prices (for the LSTM based model) area unit premeditated.

II. PROBLEM STATEMENT

Before an associate capitalist invests in any stock, he has to remember of however the securities market behaves. Investment during a sensible stock but at a foul time will have fateful results, whereas investment during a mediocre stock at the proper time will bear profits. Monetary Investors nowadays face this downside of mercantilism as they are doing not properly perceive that stocks to shop for or that stocks to sell so as to urge optimum profits.

III. OBJECTIVE

A. To predict the market value close to the tangible value thereby increasing the accuracy.
B. To analyze the stock database to predict the stocks.
C. To develop an interface to see stock trends and learn about stocks.

IV. LITERATURE REVIEW

Stocks quality victimization data processing. straightforward prediction of the Stocks that area unit trending supported individual ratings will be done. Stocks are rated supported by the number of views. With a lot of views, they're going to attain the next rating. Then their comparison will be viewed within the sort of graphs victimization knowledge visual image.

A. Current System Stock Market Prediction Using Machine Learning

The analysis work was done by V Kranthi Sai Reddy Student, ECM, Sreenidhi Institute of Science and Technology, Hyderabad, India. Within the finance world, stock mercantilism is one of the foremost necessary activities. Securities market prediction is an associate act of attempting to see the longer-term price of a stock or different monetary instrument listed on monetary exchange. This paper explains the prediction of a stock victimization Machine Learning. The technical and elementary or the statistical analysis is employed by most of the stockbrokers whereas creating the stock predictions.

B. Forecasting the Stock Market Index Using Artificial Intelligence Techniques

The analysis work done by Lufuno Ronald Marwala A thesis submitted to the college of Engineering and also the engineered surroundings, University of the Rand, city, in fulfillment of the wants for the degree of Master of Science in Engineering. The weak sort of the economical market hypothesis (EMH) states that it's not possible to forecast the longer-term value of associate quality supported by the knowledge contained within the historical costs of associate quality.

C. Limitation

The limitation is that these platforms simply have one feature. A number of the platforms even need cash to use a number of the options. To access such options, viewers have to get them.

V. METHODOLOGY

A correct prediction of stocks will cause immense profits for the vendor and the broker. For the prediction of the stock market, we used data mining and machine learning algorithms for prediction.

1) Cleaning data to have homogeneity.
2) Model building, selecting the right algorithm.
3) Gaining insights from the model results.
4) Data visualization - transforming data into a graph

A. Project Flow Diagram

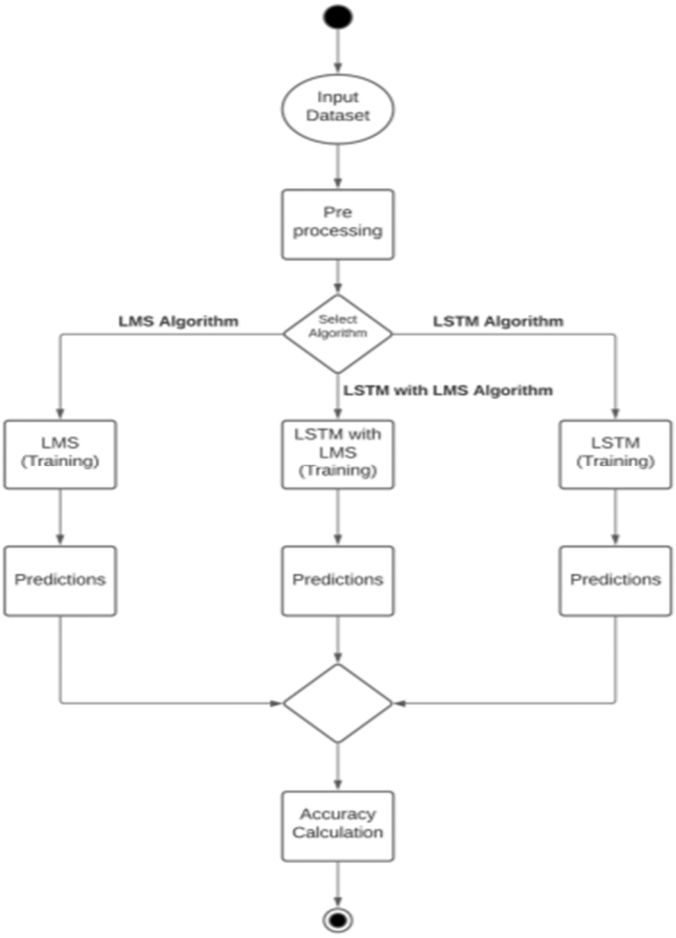

Fig 1: Activity Diagram

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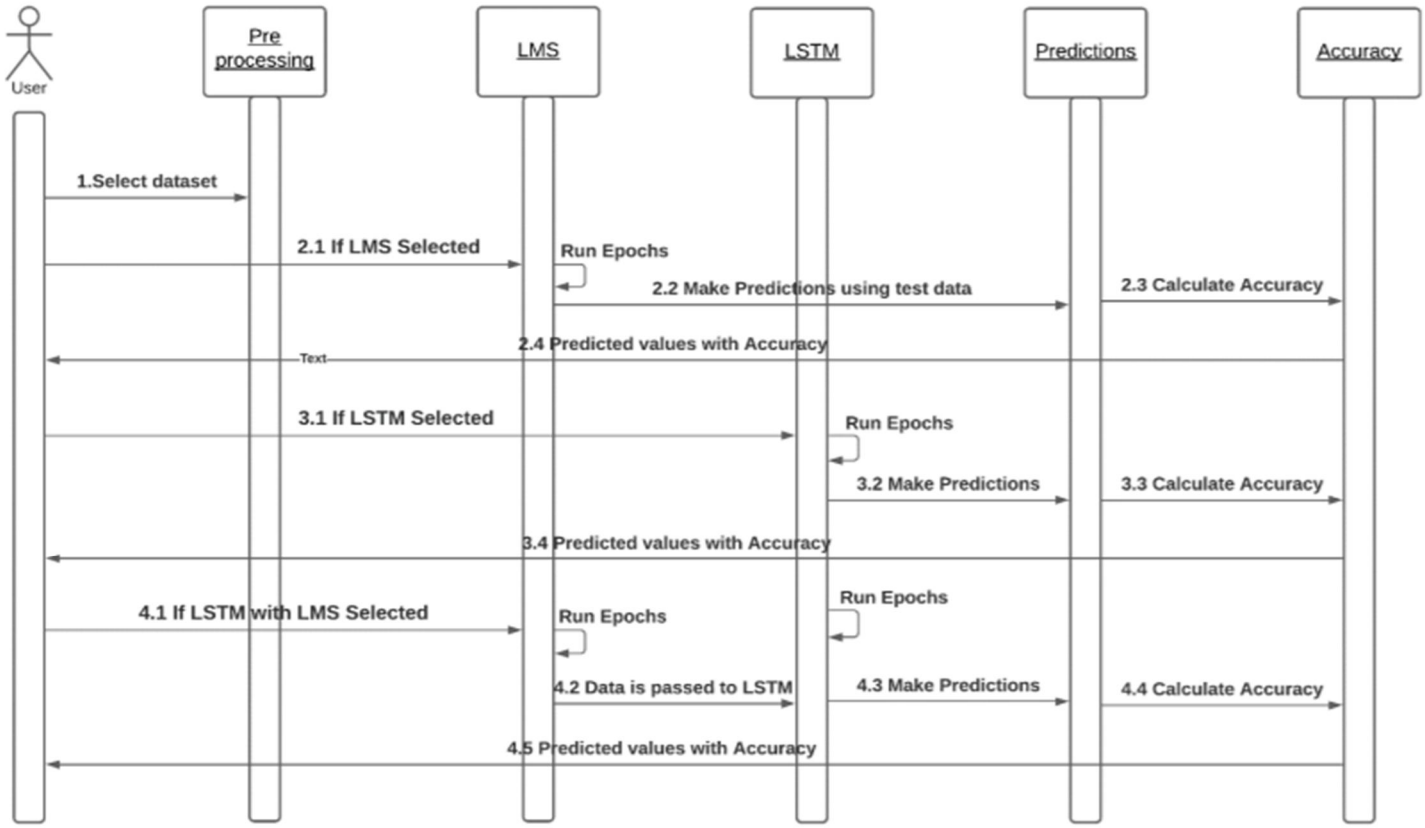

Fig 2: Sequence Diagram

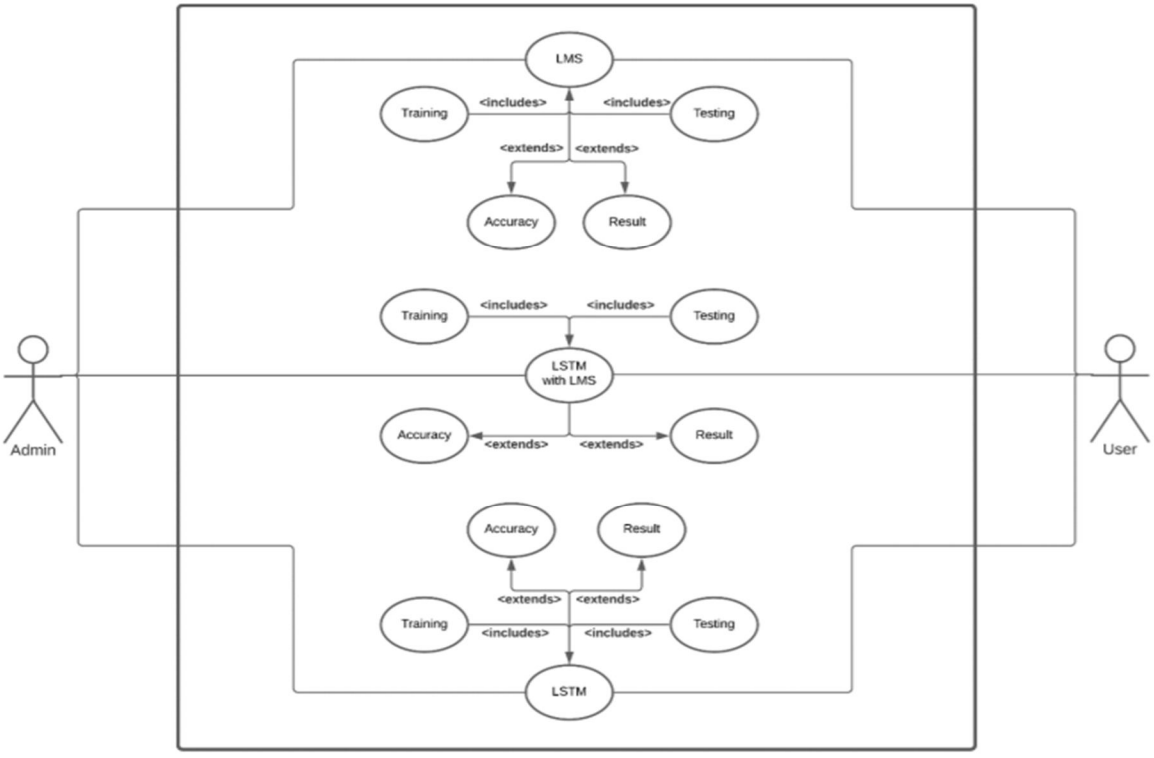

Fig 3: Use Case Diagram

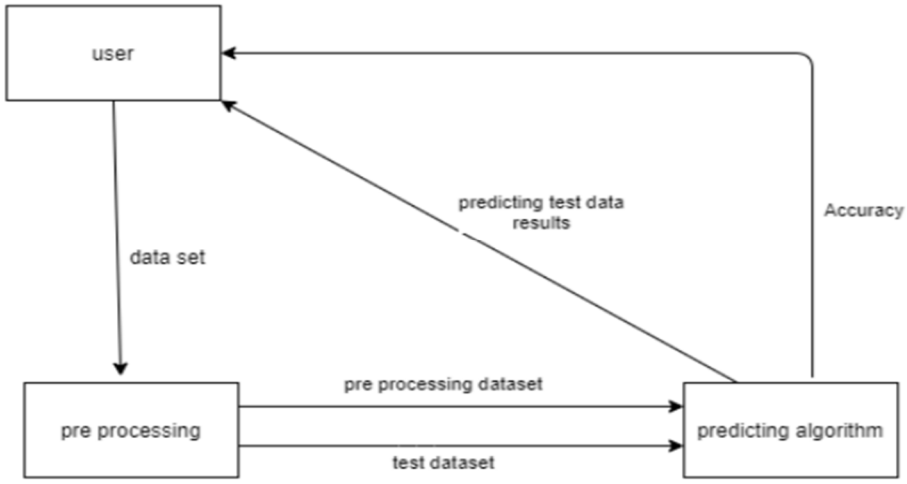

Fig 4: Data Flow Diagram

B. Implementation Images

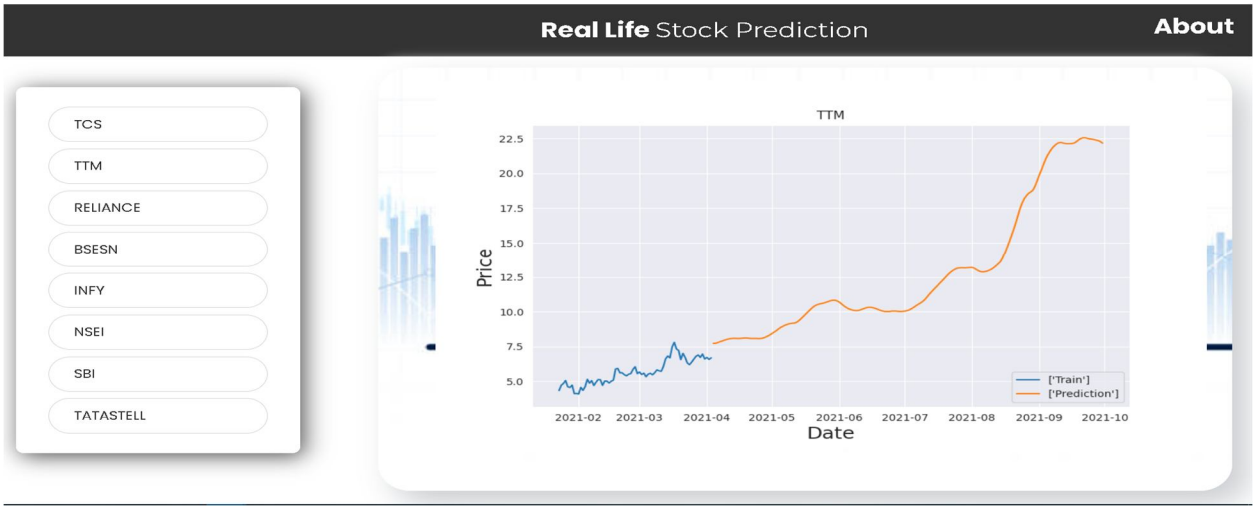

Fig 1: Stock Prediction of TTM

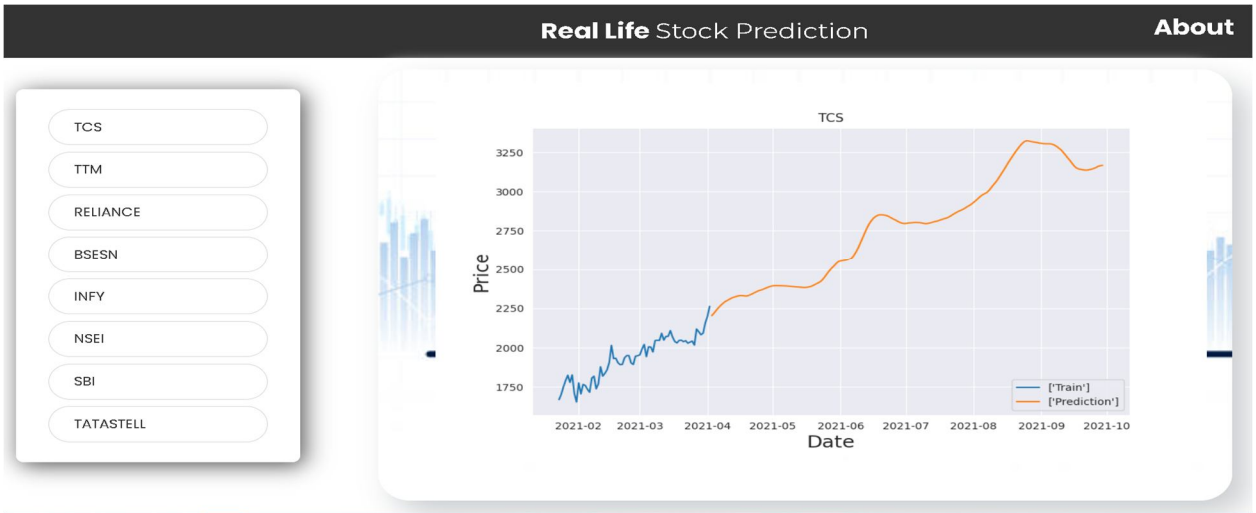

Fig 2: Stock Prediction TTS

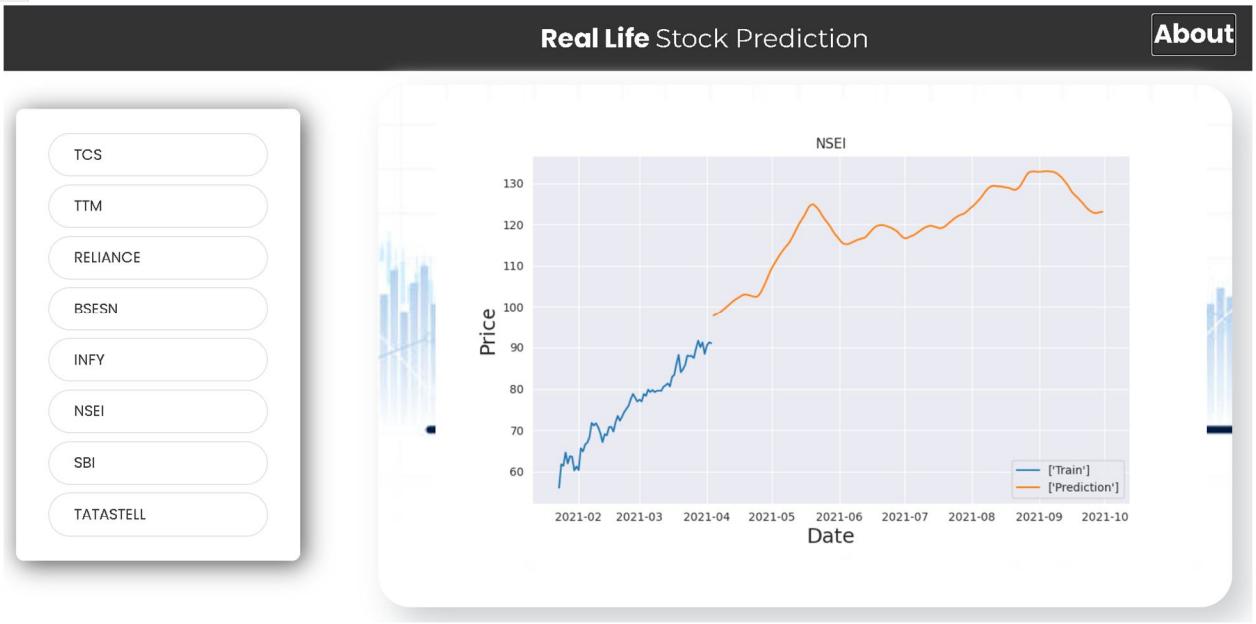

Fig 3: Stock Prediction of NSEI

VI. RESULT DISCUSSIONS

Briefly illustrate the outcomes of the project development along with the benefits to society.

1) The proposed system should be able to predict stocks accurately.
2) The system should also be able to generate graphs based on various factors to gain meaningful insights into stocks.
3) The system will be able to plot graphs of different stocks.

VII. CONCLUSION

This is to conclude that the project that we tend to undertake was worked upon with a sincere effort. Most of the necessities are consummated up to the mark and also the requirements that are remaining will be completed with a brief extension. Designed a prognosticative model to predict the securities market supported the yahoo finance dataset. Results are correctly supporting the values we'll acquire victimization data processing and machine learning.

VIII. ACKNOWLEDGEMENT

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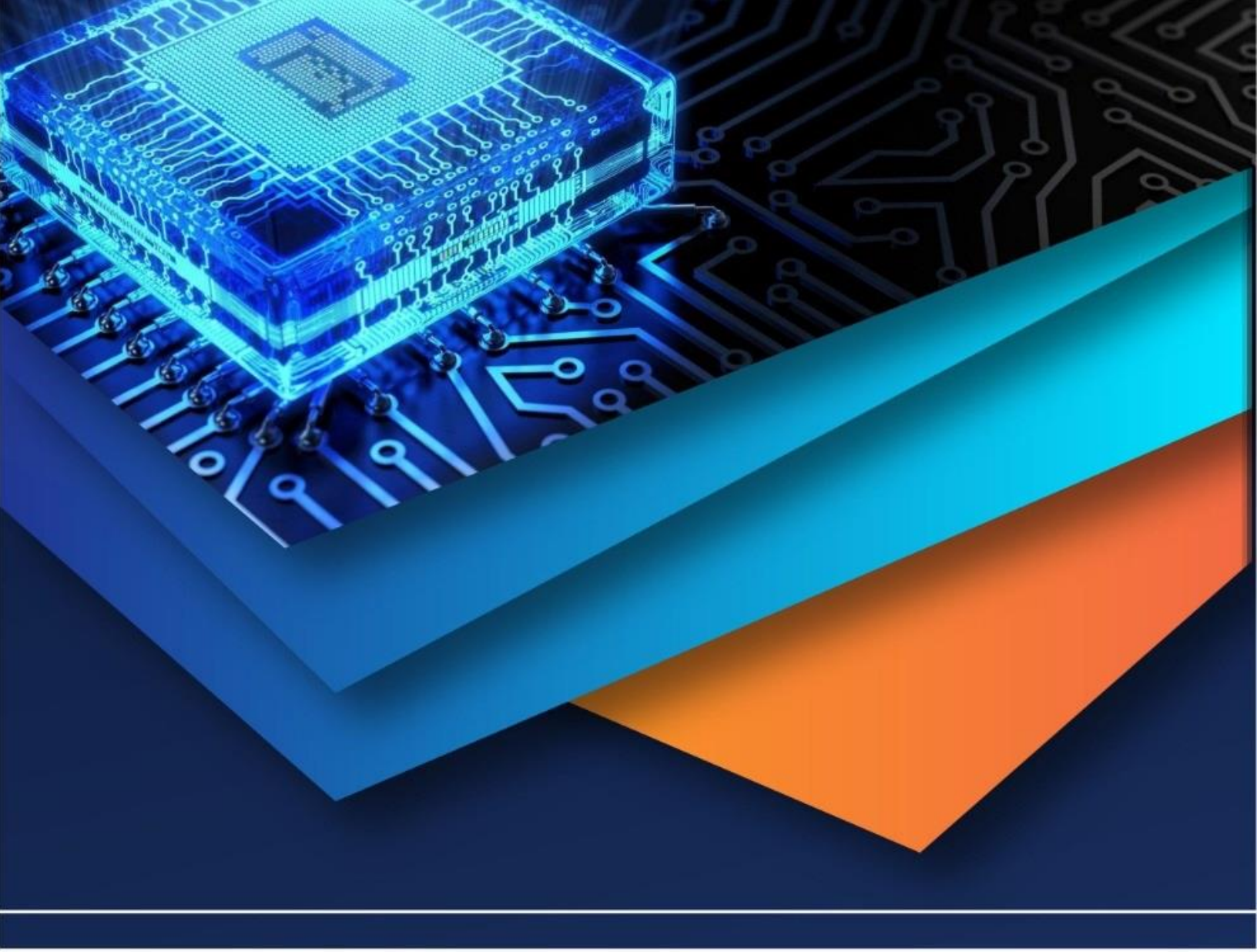

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