# STOCK MARKET PREDICTION USING MACHINE LEARNING

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*I. ABSTRACT*

In digital world the trend of stock market are getting more and more popular among the public. Prediction of the stock as well as the analyzing of the stock can help the common people who don't have much knowledge of stock market can easily People set the stop loss by visualizing and deep learning algorithm. By using different algorithm price can be predicted. Through this prediction the predicted of any stock of the world can be done.

KEYWORDS: Algorithm, Deep Learning, Stock Market

## *II. INTRODUCTION*

Machine Learning is being the application of AI that provide the system the capability for improve automatically learn and got experience from explicitly programmed. Mainly Machine Learning epicentre developed programming of computer and also access data which use to boost up themselves.

Their process of learning depend upon begins with observations or data, such as examples or instruction,

direct experience in order to watch for patterns in data and make impressive decisions in the future based on the examples that we provide. The cynosure aim of ML to get automatically adjust action accordingly without being the distract of human .

But, while using the classic algorithms of (Ml), content is considered as a extract of keywords instead, an proposal based on semantic analysis mimics the human ability to recognise the mean of a text.

## *III. RELATED WORK*

Utmost prediction techniques such as machine learning techniques, data mining technique and deep learning are used to roughly calculate the future of the stock price on that technique and discussed their assets and liabilities.

## *IV. IMPORTANCE OF STOCK MARKET*

In the world of stock market Indian stock market stood at the third largest. The stock is the important in a company's ownership. Stock are the tiny parts in the business. By the example we will see if company ownership is divided by 100 parts then if someone is buying the 1 stock from particular company then he will be the owner in that business with 1% share in that particular business which he bought.

## *V. EXISTING SYSTEM*

The previous system have the traditional method of prediction like multivariate analysis with prediction time series model. Also those prediction were too old that was giving much less correct prediction.

## *VI. ISSUE IN THE EXISTING SYSTEM*

Issue here is that its long back traditional method are being used which is outdated which need to be rectify by using the deep learning algorithm we can make it more perfect and fine way to predict any price and can be easily get to the common people which they can buying and sell the stock according to their interest of price low and high.

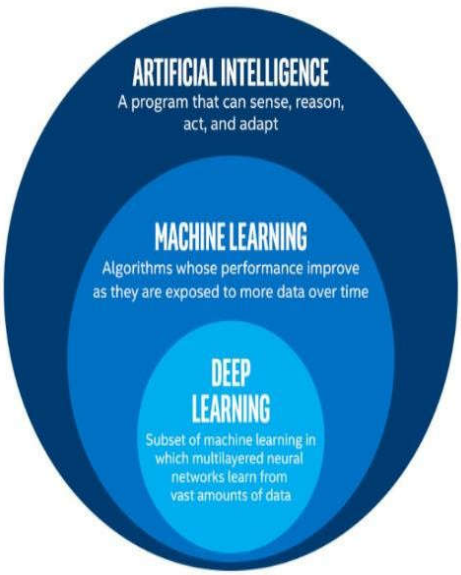
## *VII. PROPOSED SYSTEM*

In the proposed system to foresee the stock market entail a time series prognosticate along with machine learning modelling, predicting and technical analysis the fluctuating stock market.

## *VIII. ALOGORITHM USED:*

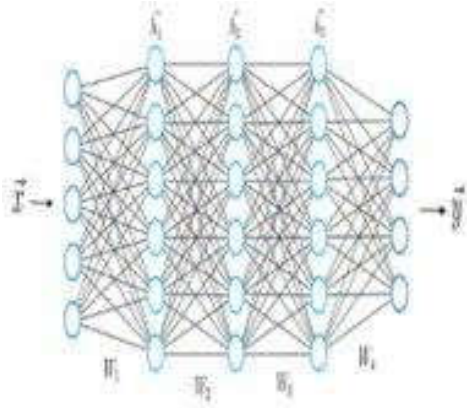
## *IX. DEEP LEARNING*

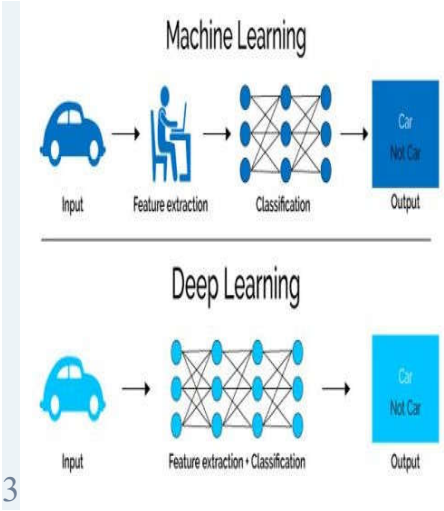
Deep learning is a branch of machine learning that uses deep neural networks to learn. Neural networks are modeled loosely after biological neural nets with connections between layers to form a hierarchy of processing. Deep learning has improved the state-of-the-art performance in many tasks, including speech recognition, image recognition, natural language processing, and others.




## *X. NUERAL NETWORK*

Brain simulations are a way of learning about how a human brain works. They can help us better understand mental health issues, as well as help doctors treat patients. Brain simulations use software that can model the workings of the neurons in a brain region. The simulation is then run on a computer to produce an accurate representation of how that region would work in the real world. This allows scientists to explore the connection between different features and see what effects they have on the brain's function.



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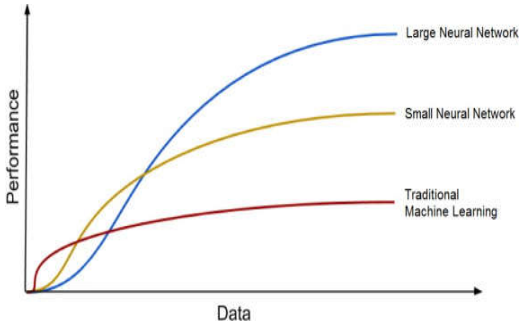
## *XI. BIG DATA*

There are many different types of data, from structured data, like the layout of a table, to unstructured data like text. Structured data is easier for computers to analyse and understand because it only contains facts in the form of numbers. Unstructured data can be in any form including pictures or videos that contain facts about

what is happening at a specific time. Big data is a type of unstructured data that is so big that it becomes difficult for humans to do anything with it. The only way computers can use this type of data is if they are programmed to do so beforehand.




## *XII. LONG SHORT TERM MEMORY*

The way that human memory works is different from the way a computer's memory works. Computers can store any type of information and retrieve it at will, but the human brain cannot. Every time we recall a memory, it is slightly altered to make sense in relation with what else we know or to fill in gaps. The brain is constantly editing and erasing memories as they are needed. Memory research suggests that there are two parts to long-term memory: episodic and semantic. Episodic memories are recollections of personal events from our own lives, whereas semantic memories are more like general knowledge about life, such as how to ride a bike or how many legs an insect has. The two types of short-term memory include sensory memory which is information that we're taking in right now through our senses, such as when you see an apple sitting on top of a desk, and working memory which is stuff that you can hold onto while doing other tasks

## *XIII. DROPOUT*

This algorithm is used to solve problems in which the content of a population changes over time. The dropout algorithm can be used to prevent bias in machine learning algorithms. It works by randomly dropping out some items and replacing them with new ones in order to update the population's makeup without changing the overall percentage of each item. A dropout algorithm is a type of machine learning algorithm that creates new, unique content by sampling old content. The algorithm takes a random sample of topics from the input data. It then selects a random number of sentences from each topic and deletes all duplicates. When sampling the old content, it will keep sentences from different topics in their original order.

### *XIV. DENSE*

An algorithm is usually a list of instructions that are to be followed. In the case of a dense algorithm, the list does not allow for repetition. For example, an algorithm for solving a 4x4x4 Rubik's cube may include the instruction: "turn [cube] one quarter turn clockwise." A dense algorithm will not include this instruction more than once.

### ***XV. SEQUENTIAL***

Sequential is a library for modelling and manipulating lists, sorted lists, queues, and other sequential collections. The mission of the library is to help you make imperative programming feel like declarative programming.

## *XVI. IMPLEMENTATION*

Any stock can be checked on this here google stock price of last five have been used to check out its working. We need to upload the price set of google stock and then run the code which will executed to give the low price of the day then high price of the stock and its volume available and the highest price gone on particular data which we are finding.

## *XVII. GOOGLE DATASET*

**Google LLC** is an American multinational technology company that epicentre in Internet related services and products, which imply online advertisement technologies, a search engine, hardware, cloud computing software.

It is cotemplate one of the big four Internet stocks along with Amazon, Meta, and Apple.

The company is listed on the NASDAQ stock exchange under the ticker symbol GOOG.

We have included 5 year 2012-2017 stock price of google for this project.

## *XVIII. CONCLUSION*

We can see the Prediction, analysis and Visualization of Google stock Price through applying Deep learning algorithms such as LSTM, DENSE, DROP OUT and SEQUENTIAL.

Same way we can use any company's Stock Dataset directly and apply these algorithms it will give us the correct prediction.

This System Successfully runs on any system even on Cloud platforms.

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