



STOCK MARKET PREDICTION USING DEEP LEARNING

A WORLD WHERE ANYONE CAN SEE THE
FUTURE OF STOCKS.

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Agenda

Title of this project

The Team

Problem Definition

Objectives and Goals

Stock Market

Approach to Analysis

LSTM


Block Diagram

Scope of Work

Project System

Project Plan and Timeline

References



Problem Definition

"Analyze to improvise"

- For successful investment, many investors are interested in knowing about the future situation of the market.
- Effective prediction systems indirectly help traders by providing supportive information such as the future market direction.
- Our aim is to help these traders based on technical analysis and reduce the amount of technical research they do.



Vision

Committed to improve the financial well-being of people and help the newbies to understand the market based on the technical analysis through our website.

Mission

Try to track the share price movement which will lead to more profit for the investors

Goals

To establish global presence, facilitate the financial well-being of people

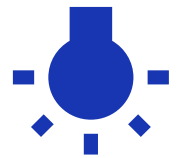
Key Objectives

**Build a product accessible
on all devices**

**Predict meaningful future
of stocks for the purpose
of analyzation**

**To enhance prediction
using the power of
Deep learning**

Stock Market



Importance

- Exist to serve the wider economy.
- Helps individuals earn a profit on their income.
- Plays an important role in the economy of a country.



Role

- They enable democratized access to trading and exchange of capital for investors of all kinds.
- They perform several functions in markets, including efficient price discovery and efficient dealing.



Need

- Investing in the stock market can be a second source of income.
- Through value appreciation and dividends, people can steadily grow additional income.

APPROACH TO ANALYSIS:

BASED ON(Traditional approach)

- Meaning
- Relevant for
- Focuses on:

FUNDAMENTAL ANALYSIS

- Fundamental Analysis is a practice of analyzing securities by determining the intrinsic value of the stock.
- Long term investments
- Past as well as present

TECHNICAL ANALYSIS

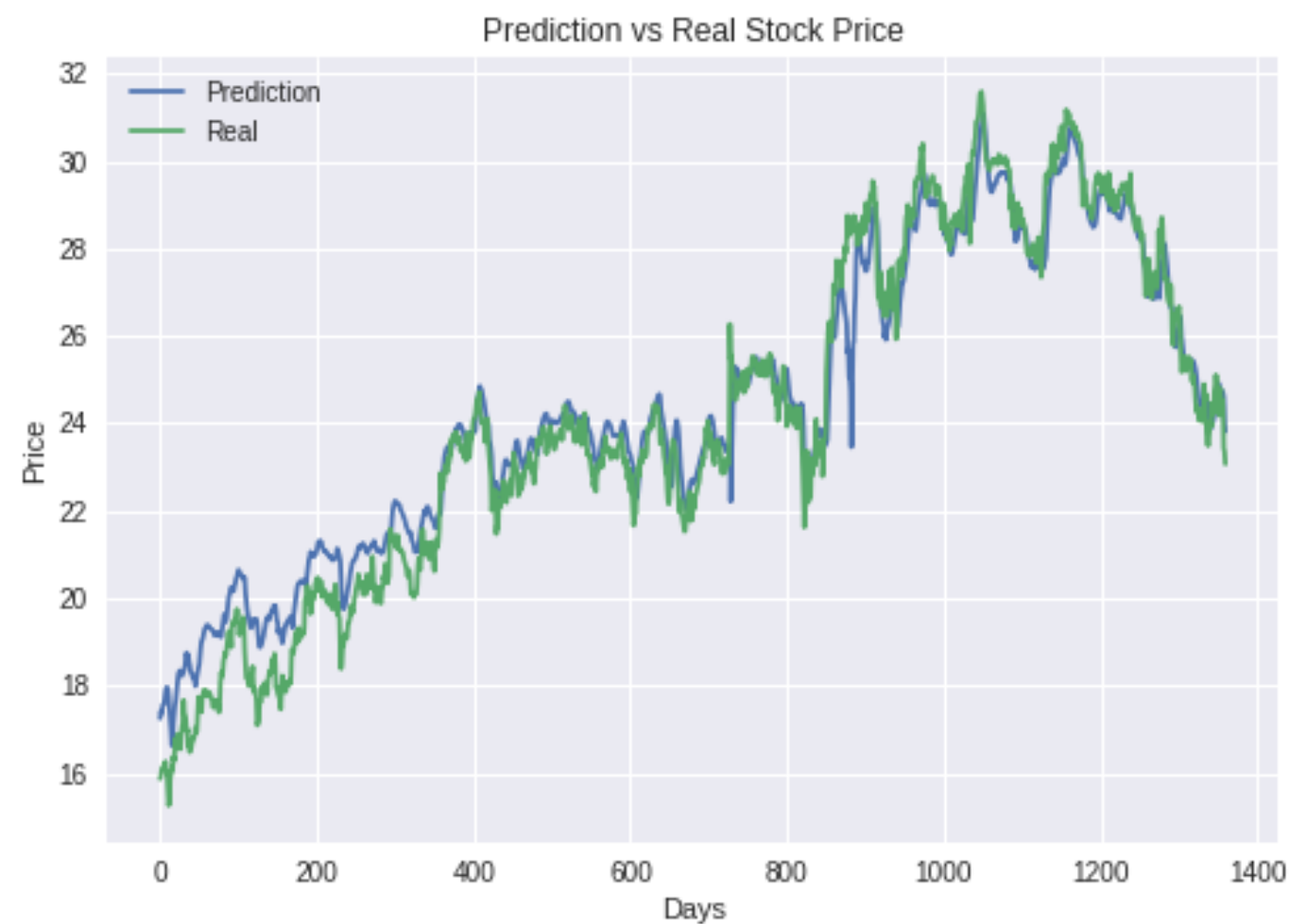
- Technical analysis is a method of determining the future price of the stock using charts to identify the patterns and trends
- Short term investments
- Past data only

MODERN APPROACH:

SENTIMENT ANALYSIS APPROACH:

It is a machine learning tool for measuring the polarity of input text. How much positive or negative content the text has based on people's emotions, beliefs, concerns etc.

LSTM (Long Short-Term Memory)



Architecture

- It's architecture comprises of cell, input gate, output gate and forget gate.

Use

- Used for classifying, processing and making predictions based on time series data.

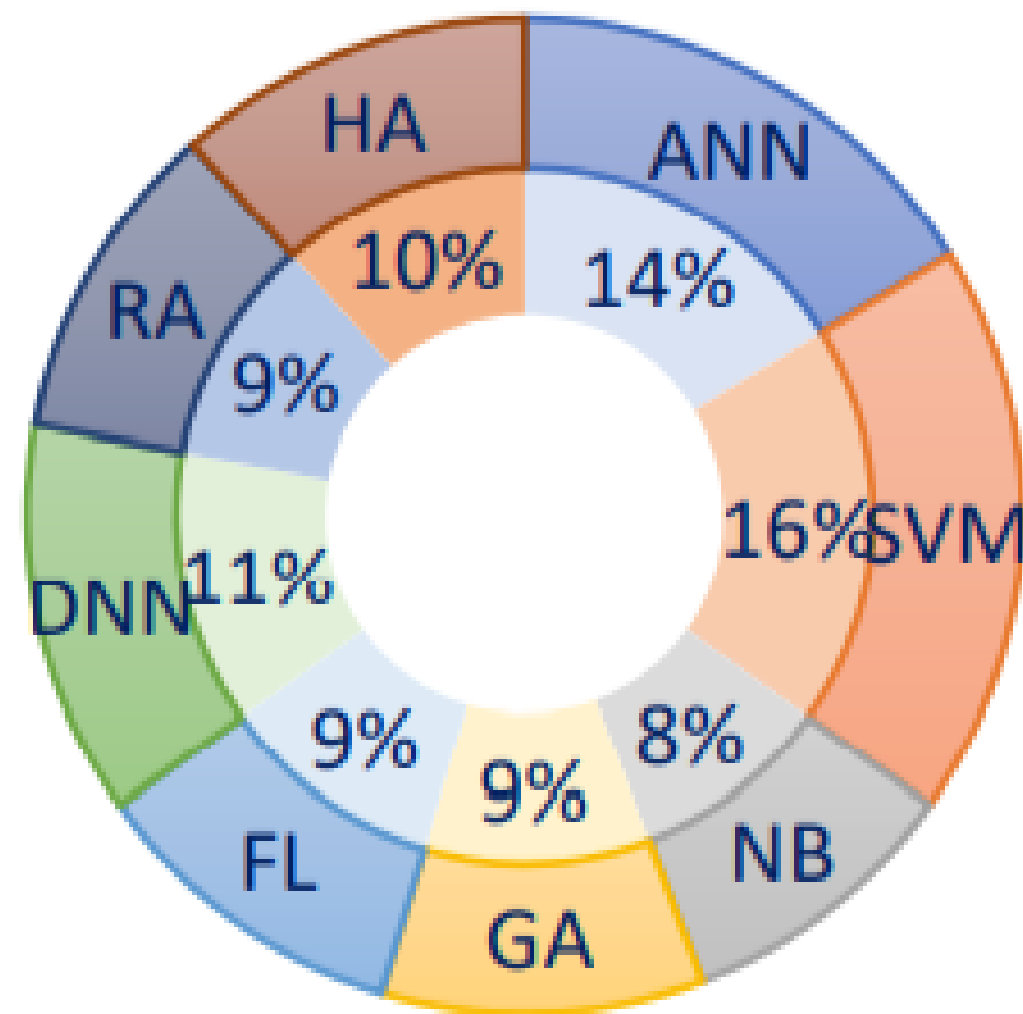
Need

- The LSTM model is very popular in time-series forecasting, and this is the reason why this model is chosen in this task.

Market Research

- 01 Various LSTM models have proved to be very accurate in some cases.
- 02 LSTM networks are well-suited to classifying, processing and making predictions based on time series data
- 03 Various types of LSTM models available for implementation

Other Machine Learning methods:



Distribution of SMP techniques

1. Artificial Neural Network:

- It is a computational model that consists of several processing elements that receive inputs and deliver outputs based on their predefined activation functions.

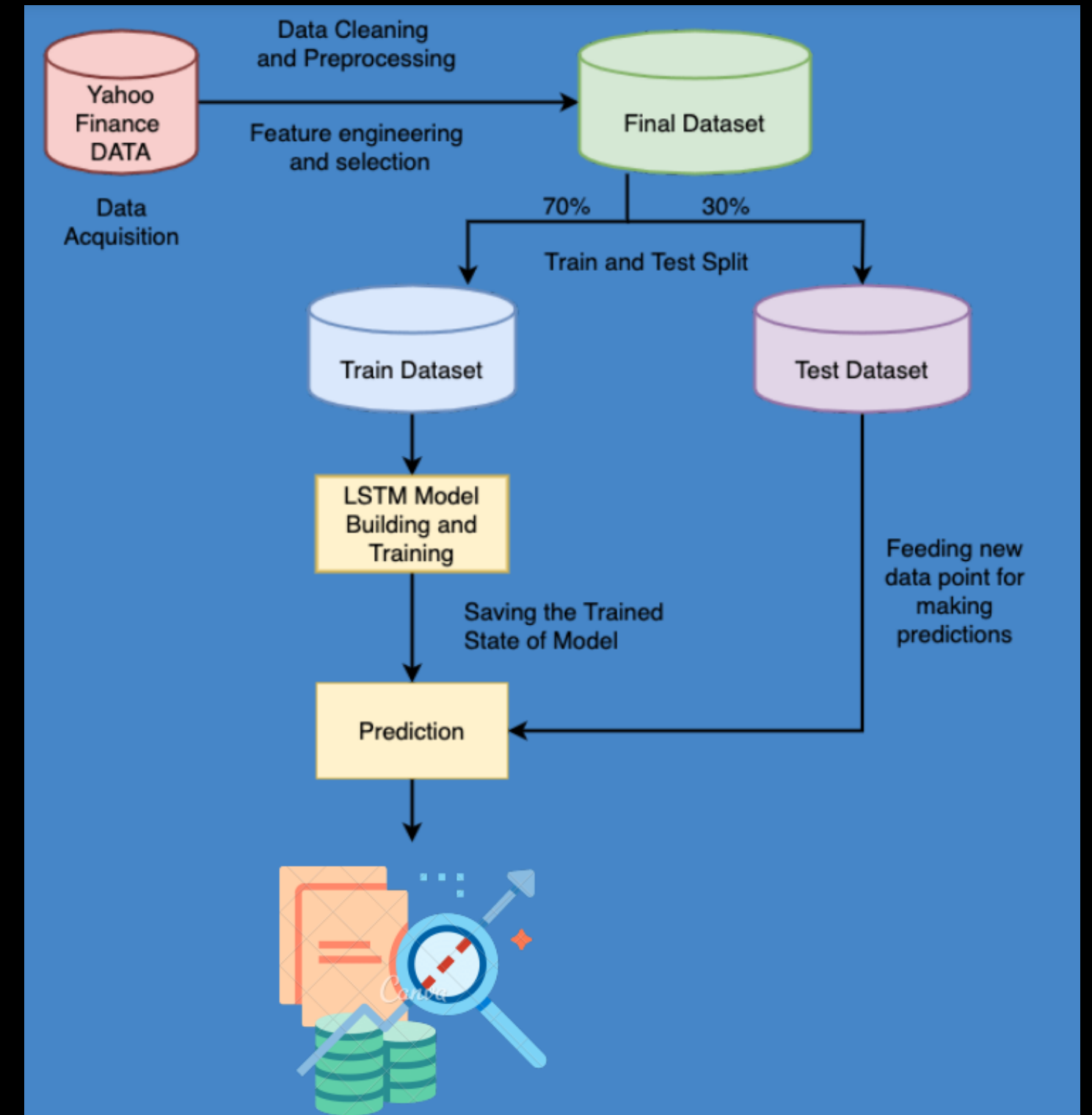
2. Support Vector machine(SVM):

- It is a supervised machine learning technique that limits error and augments geometric margins.
- In terms of accuracy, it is an important linear separation algorithm.

3. Deep Neural Network (DNN)

- At least one hidden layer
- Good at dealing with prediction problems with sizable data and complicated nonlinear mapping relations.

Initial Block Diagram



Scope of work

Building a Website with the following features

The website will be able to show the real-time data of some stocks based on available API.

Future prediction of a limited amount of stocks.

Implementation using LSTM MODEL from Keras library.

Boundaries/ Constraints

Currently we are planning to focus on a single stock and will try to predict the future of it.

References

- Research Papers
- Websites
- Reference Books

<https://towardsdatascience.com/predicting-stock-price-with-lstm-13af86a74944>

<https://analyticsindiamag.com/hands-on-guide-to-lstm-recurrent-neural-network-for-stock-market-prediction/>

<https://5y1.org/download/ddd48d3c0003dd53fbb5b2b443a7294d.pdf>

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<https://analyticsindiamag.com/hands-on-guide-to-lstm-recurrent-neural-network-for-stock-market-prediction/>

TIMELINE:

	A	B	C	D	E	F	G	H	I	J
1										
2		PROJECT TIMELINE								
3										
4		PROJECT TITLE		STOCK MARKET PREDICTION						
5		DATE		14TH FEBRUARY, 2022						
6		GROUP NUMBER		19						
7		PROJECT MEMBERS		ATHARV RAOTOLE, KARAN SHAH, SAILEE SHIRODKAR						
8										
9		PROJECT DETAILS							HOURS	
10		TASK NAME	DESCRIPTION	STATUS	START DATE	END DATE	DURATION	ESTIMATED HOURS	ACTUAL HOURS	
11										
12		PHASE I - Title Approval								
13										
14		Title Selection	Selecting the title with the help of our guide	Complete ▾	2/11/22	02/14/2022	3	5	6	
15		Research Paper	Finding the research papers and reviewing them	Complete ▾	2/13/22	2/15/22	2	20	22	
16		Technique	Choosing the method which will be used	Complete ▾	2/14/22	2/14/22	0	5	5	
17		Presentation	Making the presentation and summarizing all the points in the slides	In Progress ▾	2/17/22	2/19/22	2	7	9	
18							Total	37	42	
19										

<https://docs.google.com/spreadsheets/d/1uMDqYA9OjQMJnTXlATLfrGWKbhx1bwT-iklDo039JeQ/edit#gid=0>

The background is a solid blue color. In the top-left corner, there is a white geometric shape that looks like a corner cut. In the bottom-right corner, there are two overlapping light blue geometric shapes, one of which is a trapezoid.

Thank you!

Feel free to approach us if you have any questions.