A HYBRID MODEL FOR STOCK PRICE PREDICTION USING MACHINE LEARNING TECHNIQUES WITH CNN

**A PROJECT REPORT**

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**BONAFIDE CERTIFICATE**

Certified that this project report **A HYBRID MODEL FOR STOCK PRICE PREDICTION USING MACHINE LEARNING TECHNIQUES WITH CNN** is the bonafide work of **V VAISHNAV (17113027), SARVESH S (17113063), SIDHARTH R V (17113035)** who carried out the project work under my supervision during the academic year 2**020-2021**.

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**DEDICATION(optional)**

This project is dedicated to my beloved parents, for their love,

endless support, encouragement and sacrifices.

**ABSTRACT**

Predicting the stock market can be a great tool for both long-term and short-term investors to plan and book profits, or to stop losses early than too late. Forecasting accuracy is the most important factor in selecting any forecasting methods. Research efforts in improving the accuracy of forecasting models are increasing since the last decade. The appropriate stock selections those are suitable for investment is a very difficult task. The key factor for each investor is to earn maximum profits on their investments. In order to forecast stock markets, we used deep learning and, more specifically, one of the most common recurrent neural networks: LSTM. Since the prediction of stocks cannot be easily specified, it can be separated into two parts: simple analysis (sales, revenue, income, etc.) and technical analysis (historical price, VWAP, etc.). This means multiple variables can affect stock price trends, but here we have drawn a predictive time series on the historic price of a given stock. We've been using a common RNN, Long Short Term Memory. Provided that we feed our model with the data form and that an RNN is capable of retaining data unlike the traditional feed-in of neural networks (single data points such as images might be processed only), an LSTM is the most appropriate for these kinds of problems. LSTM can quickly process a whole data series and adds a memory cell, which allows the network to link memories and feedback remotely efficiently. In this example we have generated a series of sequences in order to use time steps to predict a given price. The final predicted model will be displayed in a web-application, so this will be user-friendly.

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# LIST OF ABBREVIATIONS(sample,use your own)

|  |  |
| --- | --- |
| KNN  CNN | K Nearest Neighbor algorithm  Convolutional Neural Network |
| DT | Decision Tree |
| SVM | Support Vector Machine |
| NB | Naïve Bayes |
| GA | Genetic Algorithm |

**CHAPTER 1 INTRODUCTION**

## Overview

# CHAPTER 2 LITERATURE REVIEW

## Introduction

* 1. **Heart Disease Prediction System using Data Mining Techniques and Intelligent Fuzzy Approach** (2016, V. Krishnaiah, G. Narsimha)

## Summary

# CHAPTER 3 PROJECT DESCRIPTION