**Predicting the Stock Market With News Articles**

**CHAPTER 1**

**TECHNICAL DESIGN DOCUMENT**

1.1 Restricted Distribution

The information is standard Company Confidential, but due to its sensitivity, it has restricted distribution and viewing within iNeuron.

1.2 Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| Date Issued | Version | Description | Author |
| 25th June 2020 | 1.0 | Initial Draft | Tejaswini Panure |

1.3 Contributors

The content of this document has been authored with the combined input of the following group of key individuals.

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| --- | --- |
| Name | Section Worked Upon |
| Tejaswini Panure | Initial Draft |
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1.4 Document Classification

|  |  |
| --- | --- |
| Classification | Company Confidential |
| Definition | Information is Group confidential and needs to be protected |
| Context | Where the loss of information confidentiality would result in significant harm to the interests of the organisation, financial loss, embarrassment or loss of information |

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**CHAPTER 2**

**INTRODUCTION**

1.1 Introduction

Stock market prediction is an area of extreme importance to an entire industry. Stock price is determined by the behaviour of human investors, and the investors determine stock prices by using publicly available information to predict how the market will act or react. Financial news articles can thus play a large role in influencing the movement of a stock as humans react to the information. Some researchers have suggested that there is a relationship between news articles and stock price movement, as there is some lag between when the news article is released and when the market has moved to reflect this information.

The goal here is to build an end to end automated system where the user will ­­get the up/down predicted probability for stock price using the best performing hyper tuned deep learning model and a Chabot for user interaction.

1.2 Input-Output

User has to provide following inputs to the system for required output.

Inputs

1. Name of the company for which user wants to predict stock prices.
2. Number of past days to consider for news articles.
3. Sources of those news articles.

Outputs

1. The Up/Down predicted probability for stock price.
2. Past trend as graph
3. Top features influencing the final prediction.

1.3 Objectives

1. Data gathering from financial websites using web scraping.

2.

**CHAPTER 3**

**DATA COLLECTION**

* 1. Introduction
  2. Web Scraping