Chapter 1: Introduction

1.1. Brief

Trading-Track is a web application that keeps track of all the trading activities in the market and keeps the traders aware of the updates. It provides real-time information including prices of different markets like forex, crypto and stocks, history data and insider information. It also provides signals to traders who are newbies in trading for better help. AI is used for price prediction of currencies and to automate the technical and fundamental analysis process. Real-time charting is introduced in the app that provides the facility to draw graphs, charts, lines, and angles on the chart for the traders who want manual technical analysis.

1.2. Relevance to course modules

Our project covers a wide range of studies regarding relevance to the course modules. Following are some:

- **Web Technologies**

The project is purely a web application and the knowledge that was learnt in Web technologies course is being utilized here. The technologies we learnt are HTML, CSS and JavaScript.

- **Artificial Intelligence**

A feature of our system is automation of technical analysis. Which in simple words is the prediction of currency prices. This prediction will be done using concepts of Artificial Intelligence that we studied in our course.

- **Database Systems**

We've learnt structured database in our course module. Having the basic concepts of database, we are implementing MongoDB which is unstructured database. The database is used to store forex signals with their details (date, instrument, time).

- **Software Engineering**

While designing the architecture model, UML diagrams, and operating the scrum. We've utilized the knowledge which we consumed in this course.

- **Professional Practices**

Taking care of copyrights and data security is the important aspect of a developed system. We have studied such concepts in one of our courses called Professional Practice and have implemented in our project.

1.3. Project Background

Business is now shifting from physical to digital world. And money-market is leading the digital markets. **$6.6 trillion** on an average is traded on foreign exchange markets every day. Most of the billionaires of the world have invested in forex and stocks market. But without proper knowledge and analysis of the market, investing is like throwing money in the ocean. According to a study, 98% of the traders fail to keep their accounts to liquidate. The other 2% who are successful are using proper tools and analysis before entering the trades.

We have developed the system to provide all the necessary tools for the traders of different levels. The beginners can use Signals which are the simple buy and sell calls of currencies without transparency or the reason of buy or sell. The intermediate traders can use AI based predictions in which the predictions are done using AI algorithms and Keras that is a Neural Networks library, and the expert traders can use charts and graphs with volume and other indicators for proper analysis and calls of trades.

1.4. Literature Review

Some existing systems are Forex factory [1]. It keeps us updated about trading news, old and new, with a calendar function that specifies the news of specific date in an instant. It keeps the visitors updated about what's new in the market, but Trading Track specializes in not only news but also several other options are there to provide a hospitable environment for the visitors. Trading view [2] tracks the current prices of markets. It shows the prices of charts and share ideas and opinions of people are shared on this website, it not a calculated idea rather a rough estimate of potential ideas that are up for further up taking.

My Fx Book [3] shows news of stocks and crypto. It also has a calendar function, we can calculate, rebate trades, the rate of pips can also be calculated, how much profit can be gained through how much pip input, can easily be calculated.

Exness [4] is a trading broker, it explains how trading is done and also displays the prices of live charts. After a careful consideration, it was decided that Trading track is going to have a merged functionality of all these and additional AI features for trade analysis and price prediction.

1.5. Analysis from Literature Review

We've developed an easy-to-use web application that helps you take trading decisions and takes your trading results to a next level.

The current available websites have paid plans that is not affordable for beginner traders. Our system is free of cost. Moreover, some of the available systems provide trading signals but don't have the details that on the basis of which setup, buy of sell call is produced. Our system solved this issue by providing transparency to the user by providing complete details.

Trading through AI is not much common yet in market. Some bots are used in markets that use predefined set of scenarios to execute trades. And scenarios in market don't always result the

same. Also, they are not available for free that is a real great challenge. Our system is totally free of cost and predicts the market with 70% accuracy which is more than enough in forex market.

1.6. Methodology and Software Lifecycle for This Project

The scrum methodology was more suitable for us because our project was research-based. Thus, it was prone to changes and scrum helped us to incorporate changes rapidly. With scrum, we divided the complex and larger modules into smaller tasks easier to perform. Also, scrum requires daily team meetings, which has helped us discuss the changes and stay consistent. Due to scrum, we met every weekend to answer these three questions:

- Has the previous goal been achieved?
- Were there any blockades and how are we going to remove them?
- What are the plans for next week?

Once our weekly goal is set. We used to hold daily meetings to divide the work, incorporate changes (if any), and finally achieve the goals.

1.6.1. Rationale behind Selected Methodology

We adopted Scrum due to the following reason:

- It is adaptable and flexible.
- It encourages a creative approach.
- It helps to incorporate changes rapidly.
- We can divide the complex and larger modules into smaller tasks and then integrate

  them into the projects' main objective.

It leads to better quality work as we repeat the steps of planning, executing, and evaluating at the end of our phase.