# Need Analysis Document

Project: Algo Trading

## 1. Introduction

Stock markets are uncertain and influenced by multiple factors. Investors and analysts need tools that can help predict price movements for better decision-making. This project aims to build a system that uses data and machine learning models to forecast stock prices.

## 2. Problem Statement

Difficult to manually analyze stock trends.

High uncertainty in predicting price movements.

Lack of reliable predictive tools for investors.

## 3. Objectives

Collect and analyze historical stock data.

Build a machine learning model to predict prices.

Provide visual forecasts to help users make better investment decisions.

## 4. Stakeholders

Retail Investors

Financial Analysts

Investment Firms

Researchers

## 5. Business Need

Reduce risk in investment decisions.

Save time and effort in analyzing market data.

Provide competitive advantage to users through AI-based insights.

## 6. Requirements

Functional Requirements:

- Data collection from stock market sources.
- Data preprocessing (cleaning, normalization).
- Prediction model (ML/DL algorithms).
- Dashboard for visualization.

Non-Functional Requirements:

- Accuracy of predictions.
- Scalability for multiple stocks.
- Security of financial data.
- User-friendly interface.

## 7. Success Criteria

Prediction model gives better results than basic benchmarks.

Users find the system easy and useful.

Supports multiple stock predictions effectively.