AARTHI.M

Final Project

PROJECT TITLE

STOCK PREDICTION USING RANDOM FOREST ALGORITHM

AGENDA

1.PROBLEM STATEMENT
2.PROJECT OVERVIEW
3.WHO ARE THE END USERS
4.SOLUTION AND ITS VALUE PROPOSITION
5.THE WOW IN THE SOLUTION
6.MODELLING
7.RESULT

PROBLEM STATEMENT

- **The objective of this project is to develop a predictive model using the Random Forest algorithm to forecast stock prices accurately.**
- **The model will utilize historical stock price data along with other relevant features to predict future price movements.**
- **The goal is to build a robust and reliable prediction system that can assist stakeholders in making informed decisions regarding stock investments.**

PROJECT OVERVIEW

- This project aims to develop a model to predict the stock price using the algorithm called as Random Forest Algorithm.
- The stock price is predicted using the prices of the past dataset.
- The output displays the actual and the predicted value of the stock .

WHO ARE THE END USERS?

- **Traders**
- **Investors**
- **Financial Analysts**
- **Financial Software Developers**
- **Quantitative Analysts**

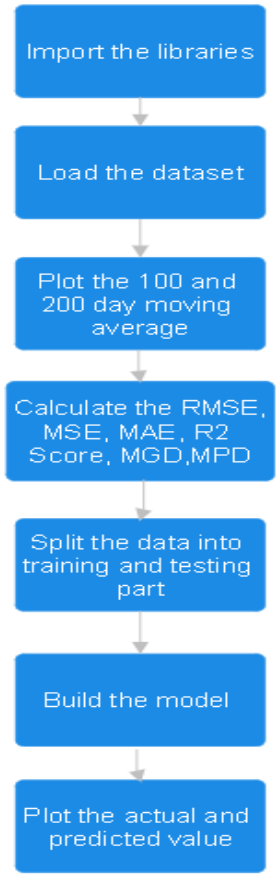
SOLUTION AND ITS VALUE PROPOSITION

- **Developing a stock prediction solution using the Random Forest algorithm involves collecting historical stock price data and relevant features, preprocessing the data, and engineering new features if necessary.**
- **Then, a Random Forest regression model is designed and trained, with hyper parameters optimized through techniques like cross-validation.**
- **The trained model is evaluated using testing data, assessing its performance with metrics such as MAE, MSE, and RMSE.**
- **Once validated, the model is deployed for real-time prediction or integration into existing systems, with ongoing monitoring and maintenance to ensure accuracy and adaptability to market changes.**

THE WOW IN YOUR SOLUTION

- **The solution will be more accurate.**
- **The model is more adaptable for any kind of data.**
- **The model is more efficient for the user.**

MODELLING


Import the libraries
Load the dataset
Plot the 100 and 200 day moving average
Calculate the RMSE, MSE, MAE, R2 Score, MGD,MPD
Split the data into training and testing part
Build the model
Plot the actual and predicted value

RESULTS

[Demo Link]