



GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous)

Cheeryal (V), Keesara (M), Medchal Dist., Telangana - 501 301

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MINI PROJECT ABSTRACT
IV B.Tech. I SEM CSE - C Section

BATCH NUMBER: C6	Mini Project	Academic Year: 2024-2025
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PROJECT TITLE:

Option Trading Using Machine Learning

TEAM MEMBERS:

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GUIDE DETAILS:

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*Signature of the
Project In-charge*

*Signature of the
Guide with Date*

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Project Coordinator*

ABSTRACT

This project involves the analysis and visualization of stock market data, specifically focusing on the Nifty 50 index. Using Python, we generated a dataset consisting of 100 days of 'Low' and 'High' stock values, based on normal distributions. The dataset was extended to include predictive values by shifting the original data by three days and adding random deviations, simulating a simple predictive model. The primary algorithms and methods used include data generation with normal distributions, data manipulation with NumPy's `roll` function, and visualization using Matplotlib. Fractal patterns were identified and marked on the plot to highlight significant points where the stock prices showed local minima and maxima. The resulting graph provides a comprehensive view of actual and predicted stock values, enhanced with visual markers for fractal analysis, aiding in the identification of potential market trends.

Keywords: Stock Market Analysis, Nifty 50 Index, Predictive Modeling, Data Visualization, Fractal Patterns, Time Series Analysis, Python, Matplotlib, NumPy, Pandas

Objective:

The objective of this project is to analyze and visualize market data, develop a simple predictive model for future prices, and identify fractal patterns to gain insights into market trends and potential price movements.

Commercializable: Yes/No: Yes

REFERENCES:

<https://in.tradingview.com/>

<https://www.moneycontrol.com/>

Date of Submission: 27-04-2024

**Signature of the
Guide with Date**

**Signature of the
Project In-charge**