



Project Title	Stock Market Analysis
Technologies	PowerBi/Tableau
Domain	Finance
Project Level	Difficult
Organization	INeuron Intelligence Private Limited

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1. Problem Statement:

A stock market, equity market, or share market is a gathering of buyers and sellers of stocks (also known as shares), which represent ownership claims on businesses; these may include securities listed on a public stock exchange as well as stock that is only traded privately, such as shares of private companies sold to investors through equity crowdfunding platforms. Typically, investments are undertaken with an investment strategy in mind.

The National Stock Exchange of India Ltd.'s main index is the NIFTY 50. (NSE). The Index follows the performance of a basket of blue-chip businesses, India's largest and most liquid equities. It contains 50 of the nearly 1600 businesses listed on the NSE, accounts for approximately 65 percent of its float-adjusted market value, and is an accurate representation of the Indian stock market.

The NIFTY 50 index encompasses significant sectors of the Indian economy and provides investment managers with exposure to the Indian market through a single, efficient portfolio. The Index has been in operation since April 1996 and is ideal for benchmarking, index funds, and index-based derivatives.

India Index Services and Products Ltd owns and manages the NIFTY 50. (IISL). IISL is India's first specialized corporation with an index as its primary product.

The Dataset:

The data represents the price history and trading volume of the fifty stocks in the NIFTY 50 index from India's NSE (National Stock Exchange). All databases are on a daily basis, with pricing and trading values distributed across. CVS files for each stock, as well as a metadata file containing some macro-information on the stock. The data ranges from January 1, 2000 to April 30, 2021.

Tasks involved:

- Perform ETL (Extract, Transform and Load) tasks to prepare the data for analysis purposes.
- Perform various data visualization techniques, analyze the market trends and submit a detailed report such that the insights can directly help a person make better investing decisions and would maximize his/her returns in the long run.

Dataset link:

[NIFTY-50 Stock Market Data](#)

Note: Feel free to explore a Stock-Market dataset of your own choice if you may.

2. Project Evaluation metrics:

2.1. Code:

- You are supposed to write code in a modular fashion
- Safe: It can be used without causing harm.
- Testable: It can be tested at the code level.
- Maintainable: It can be maintained, even as your codebase grows.
- Portable: It works the same in every environment (operating system).
- You have to maintain your code on GitHub.
- You have to keep your GitHub repo public so that anyone can check your code.
- Proper readme file you have to maintain for any project development.
- You should include basic workflow and execution of the entire project in the readme file on GitHub.
- Follow the coding standards.

2.2. Database:

MongoDB is a source-available cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with optional schemas.

2.3. Cloud:

You can use any cloud platform for this entire solution hosting like AWS, Azure or GCP

2.4. API Details or User Interface:

You have to expose your complete solution as an API or try to create a user interface for your model testing. Anything will be fine for us.

2.5. Logging:

Logging is a must for every action performed by your code, use the python logging library for this.

2.6. DevOps Pipeline: Build complete Continuous Integration, Continuous Testing, and Continuous Deployment pipelines for multi stage such as test environments and production environment. Docker containers/ Kubernetes cluster must be used for deployment of applications.

2.7. Deployment:

Implementation of reverse proxy, load balancing, and security group is mandatory for deployed applications.

2.8. Solutions Design:

You have to submit complete solution design strategies in HLD, LLD, and Wireframe documents.

2.9. System Architecture:

You have to submit a system architecture design in your wireframe document and architecture document.

2.10. Optimization of solutions:

Try to optimize your solution on code level, architecture level, and mention all of these things in your final submission.

Mention your test cases for your project.

3. Submission requirements:

3.1. High-level Document:

You have to create a high-level document design for your project. You can reference the HLD form below the link.

Sample link: [HLD Document Link](#)

3.2. Low-level document:

You have to create a Low-level document design for your project; you can refer to the LLD from the link below.

Sample link: [LLD Document Link](#)

3.3. Architecture:

You have to create an Architecture document design for your project; you can refer to the Architecture from the link below.

Sample link: [Architecture sample link](#)

3.4. Wireframe:

You have to create a Wireframe document design for your project; refer to the Wireframe from the link below.

Demo link: [Wireframe Document Link](#)

3.5. Project code:

You have to submit your code to the GitHub repo in your dashboard when the final submission of your project.

Demo link: [Project code sample link](#)

3.6. Detail project report:

You have to create a detailed project report and submit that document as per the given sample.

Demo link: [DPR sample link](#)

3.7. Project demo video:

You have to record a project demo video for at least 5 Minutes and submit that link as per the given demo.

Demo link: [Project sample link](#)

3.8. The project LinkedIn a post:

You have to post your project details on LinkedIn and submit that post link in your dashboard in your respective field.

Demo link: [Linkedin post sample link](#)