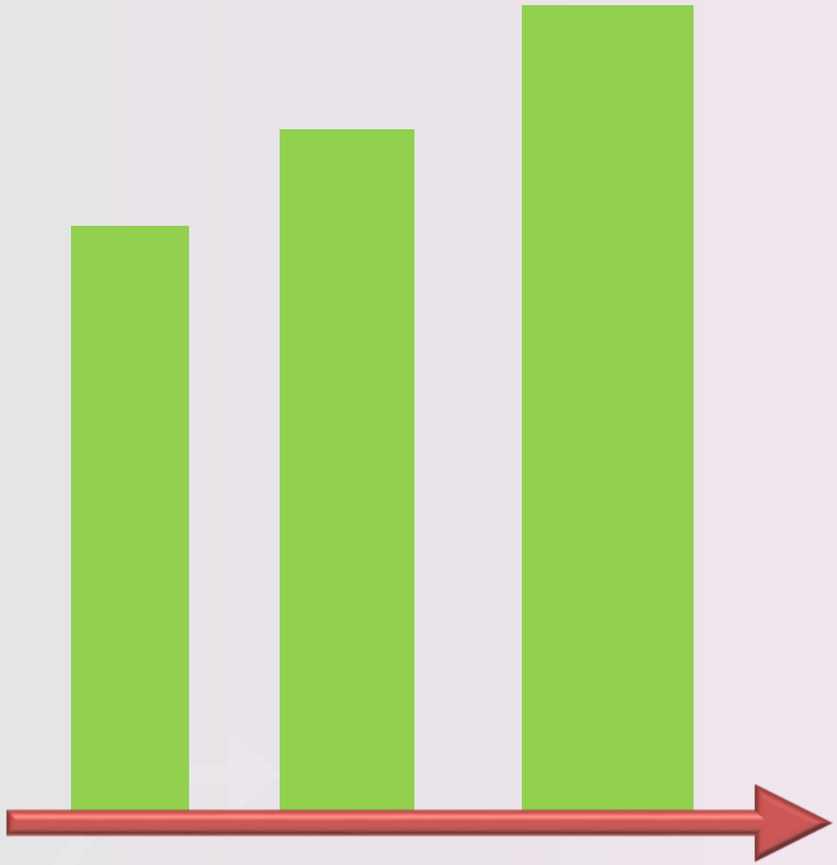
STOCK-DATA DRIVEN ANALYSIS

Introduction



1. Data Driven Stock Analysis analyzes stock market data using computational techniques to identify trends, patterns, volatility, and performance metrics.

2. This project processed using Python, Pandas, with interactive dashboards built in Power BI for visual market exploration.

3. The analysis is further extended through a Stream lit-based web dashboard, enabling real-time, interactive visualization of stock trends.

Technology and Plot Used

Technology

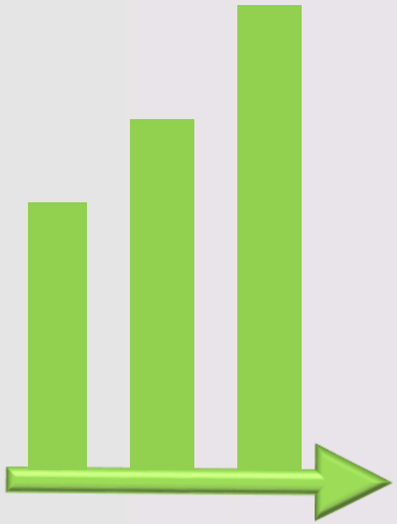
1. Python: It is used to clean, process, and analyze stock data.
2. Power BI: It creates interactive analytical dashboards with the help of data.
3. Stream lit: It deploys the analysis as a web application.
4. Matplotlib: It visualize trends, volatility, and stock performance clearly.
5. Pandas: It cleans the data and make a clear data frame of stock.

Plot

1. Bar Plot: Compares stock performance, volatility, sector-wise returns,
   and top gainers or losers across different categories.
2. Line Plot: Shows stock price or cumulative return trends over time to understand growth and performance patterns.
3. Heat map: Displays correlation between stock prices, highlighting how different stocks move in relation to each other.

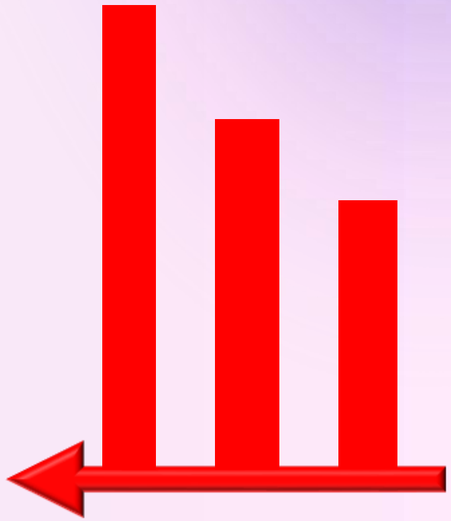
Stock Data Analyses & Metrics

GAINING STOCK



1) Analysis of Gaining Stock(Green Stock).
2) Analysis of Loosing Stock(Red Stock).
3) Average Price by Gain Stock.
4) Average Price by Loose Stock.
5) Average Volume by Gain Stock.
6) Average Volume by Loose Stock.
7) Top 10 Most Volatile Stock.
8) Cumulative Return for Top 5 Performing Stock.
9) Stock Price Correlation Heat map.
10) Top 5 Gainer Yearly Return.
11) Top 5 Looser Yearly Return.
12) Average Yearly Return by Sector.

LOOSING STOCK



Observation

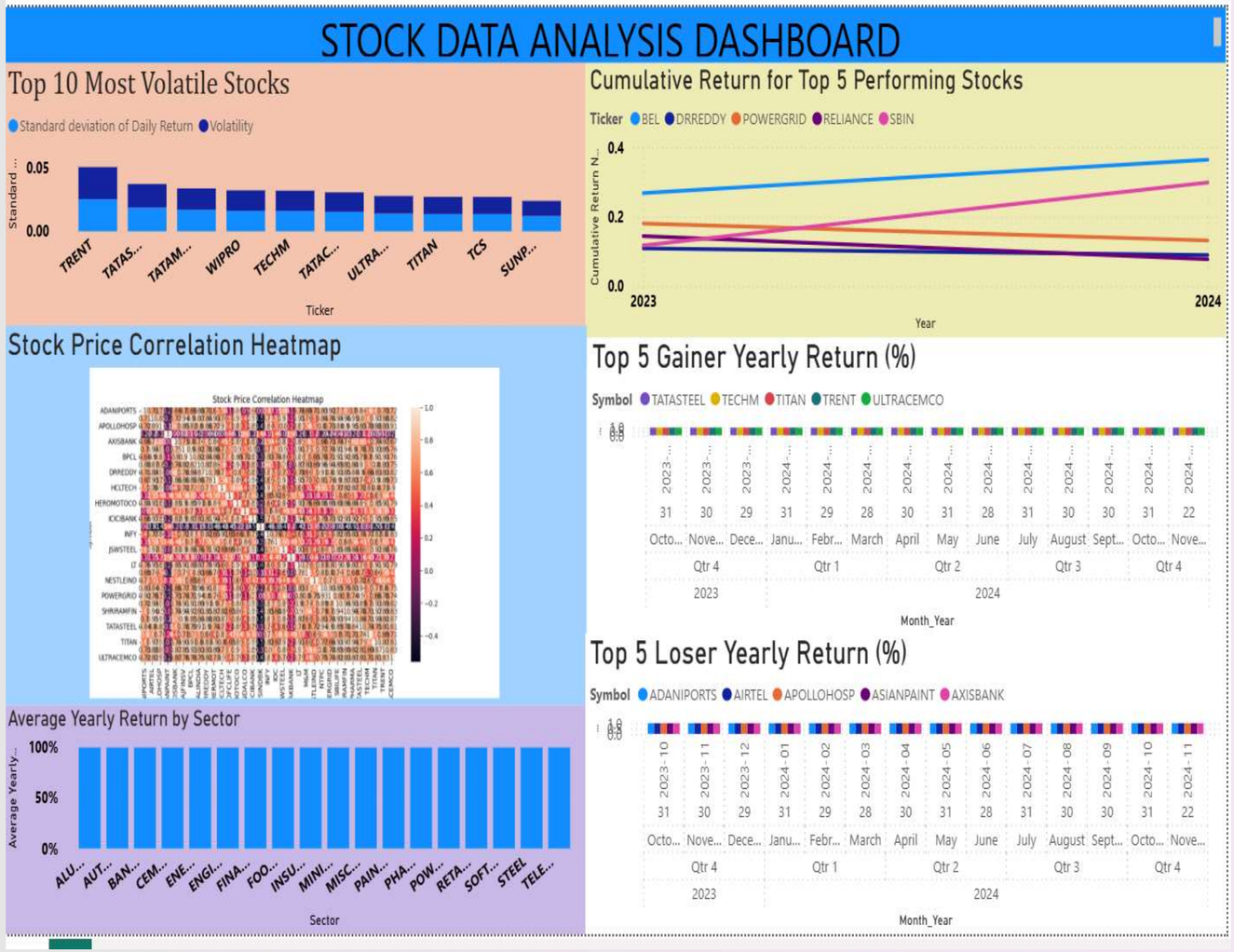


Fig1: Volatile Stock, Cumulative Return, Correlation Heat map, Average Yearly Return, Gainer & Looser Yearly Return

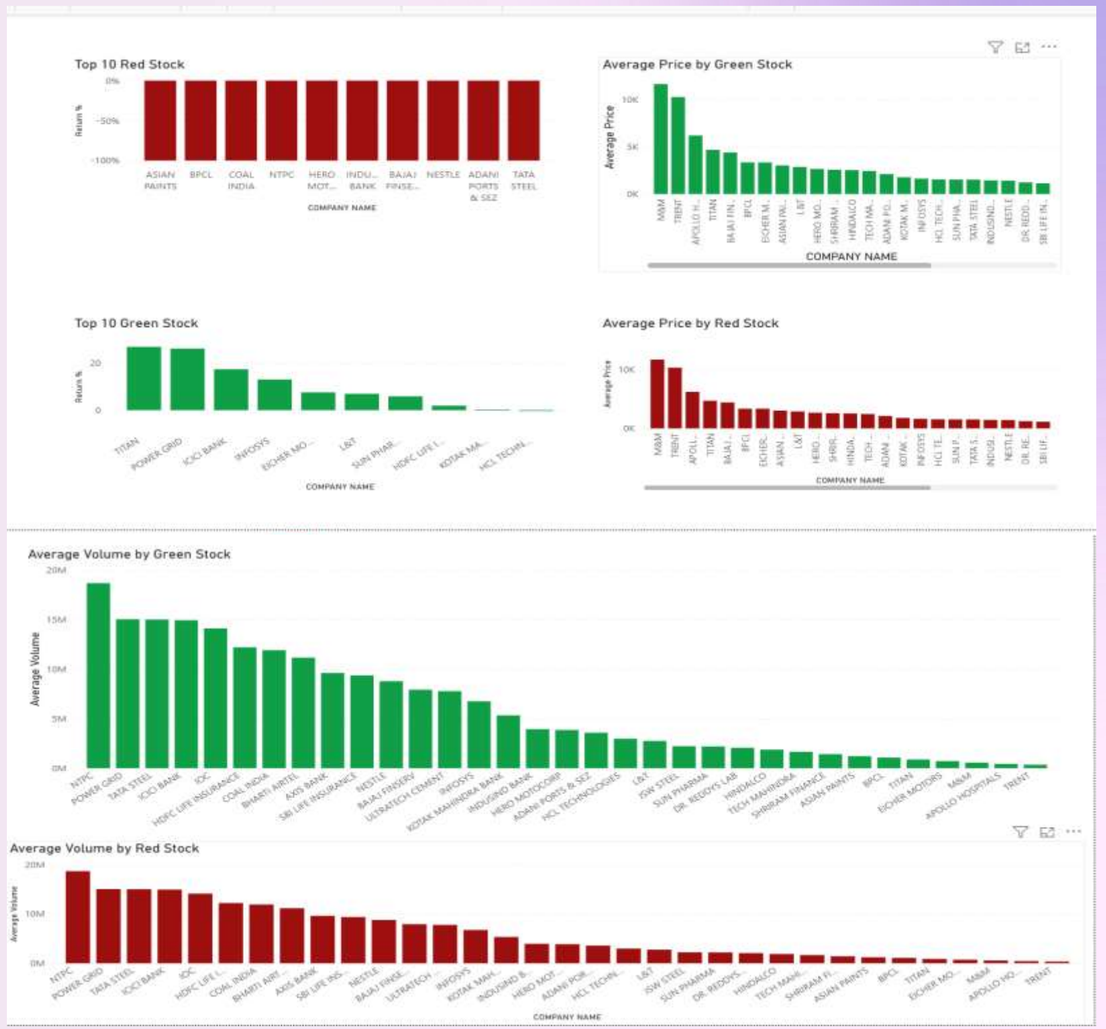


Fig2: Green & Red Stock, Average Price, Average Volume

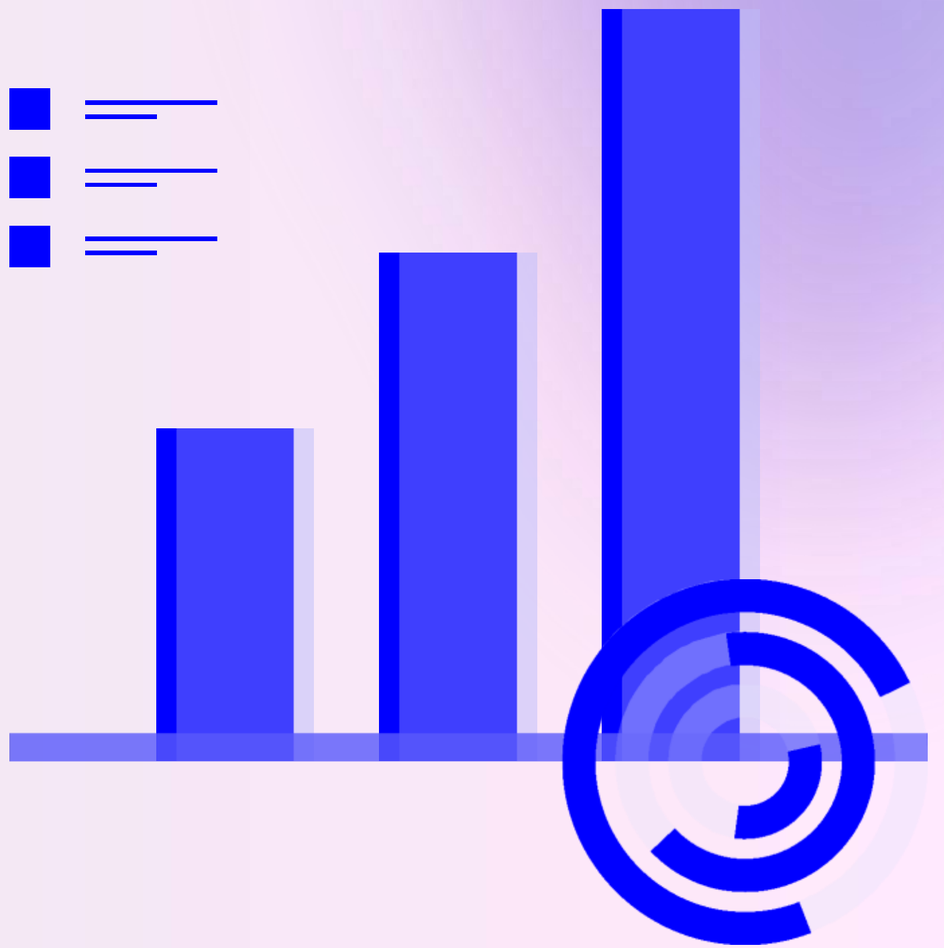
Future Scope

1) The project can be extended to include real-time stock data integration for live market monitoring and analysis.

2) Advanced machine learning models can be added to predict future stock trends and price movements.

3) The dashboard can be scaled to cover global markets and support personalized investment recommendations.

4) The project can incorporate automated alerts and notifications to inform users about significant market movements or risks.



Thank You

We welcome you feedback and question

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