Email Campaign Performance Dashboard

Project Report by Vaibhav Sharma
Date: April 08th, 2025
Tools Used: Python (Pandas, yFinance), Tableau, Excel

INDEX

1. Project Overview

This project explores historical NASDAQ stock data using the yfinance Python package and builds an interactive Tableau dashboard to help users analyze stock performance over time. The objective is to uncover patterns in stock prices, trading volume, and adjusted closing values, while offering an intuitive visual platform for comparing multiple tickers.

2. Objective & Goals

- Track stock performance trends across various NASDAQ-listed companies.
- Compare tickers based on high/low prices, volume, and adjusted close.
- Identify patterns in price movement and trading activity over time.
- Deliver an interactive, user-friendly dashboard for investors or analysts.

3. Dataset Description

The dataset was retrieved using the yfinance Python package and includes daily historical stock data.

Common Columns in Each CSV:

- **Date**: Trading day
- **Open**: Opening price
- **High**: Highest price that day
- **Low**: Lowest price that day
- **Close**: Closing price (adjusted for splits)
- **Adj Close**: Adjusted for both dividends and splits
- **Volume**: Number of shares traded

Source:

- [Yahoo Finance](#)
- Automated using the Python yfinance library.

	Date	Open	High	Low	Close	Adj Close	Volume	MA50	MA200	Previous day close price	Change in price	Percent change in price	Previous day volume	Change in volume	Percent change in volume
0	1980-12-12	0.513393	0.515625	0.513393	0.513393	0.406782	117258400	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
1	1980-12-15	0.488839	0.488839	0.486607	0.486607	0.385558	43971200	NaN	NaN	0.513393	-0.026786	-0.052174	117258400.0	-73287200.0	-0.625006
2	1980-12-16	0.453125	0.453125	0.450893	0.450893	0.357260	26432000	NaN	NaN	0.486607	-0.035714	-0.073394	43971200.0	-17539200.0	-0.398879
3	1980-12-17	0.462054	0.464286	0.462054	0.462054	0.366103	21610400	NaN	NaN	0.450893	0.011161	0.024752	26432000.0	-4821600.0	-0.182415
4	1980-12-18	0.475446	0.477679	0.475446	0.475446	0.376715	18362400	NaN	NaN	0.462054	0.013393	0.028986	21610400.0	-3248000.0	-0.150298

4. Analysis & Key KPIs

KPIs Tracked:

- **Average Closing Price:** Trends and moving averages
- **Daily Price Change:** High - Low analysis
- **Volume Trends:** Trading activity across time
- **Adjusted Close:** Real investment value per ticker
- **Volatility:** Price movement range over time

Sample Insights:

- Tech sector tickers showed high trading volume in early 2020.
- Some tickers demonstrated strong recovery after pandemic dips.
- Volume spikes aligned with news events (can be enhanced with external data).

MA50	MA200	Previous day close price	Change in price	Percent change in price	Previous day volume	Change in volume	Percent change in volume
NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
NaN	NaN	0.513393	-0.026786	-0.052174	117258400.0	-73287200.0	-0.625006
NaN	NaN	0.486607	-0.035714	-0.073394	43971200.0	-17539200.0	-0.398879
NaN	NaN	0.450893	0.011161	0.024752	26432000.0	-4821600.0	-0.182415
NaN	NaN	0.462054	0.013393	0.028986	21610400.0	-3248000.0	-0.150298

5. Tableau Dashboard (Visual Section)

This visual represents the complete Stock Market dashboard built using Tableau. It consolidates all key KPIs and campaign metrics into a single interactive view for quick insights and strategic decision-making.
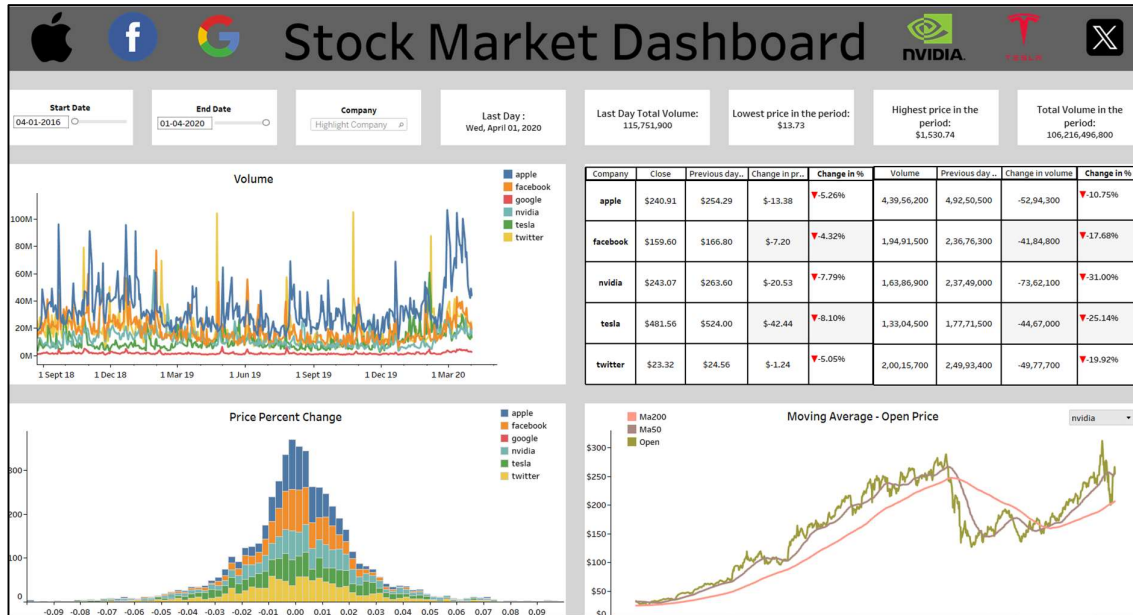
Dashboard Features:

- **Line Charts**: Compare stock performance over time.
- **Dropdown Filters**: Choose specific tickers to visualize.
- **KPI Cards**: Average price, highest high, lowest low, total volume.
- **Interactive Tooltip**: Hover for detailed value insight.

6. Conclusion & Recommendations

Conclusion:

The dashboard simplifies stock analysis for both technical and non-technical users. It offers a real-time view into stock behaviour, enabling better market understanding and data-driven decision-making.

Recommendations:

- Add news sentiment data to correlate spikes in volume/price

- Apply technical indicators (e.g., RSI, MACD) for deeper trading analysis

- Automate regular data refresh with updated yfinance pulls

7. Next Steps

- Host dashboard on Tableau Public (optional).
- Export daily updated CSVs from Python.
- Enhance with portfolio comparison or back testing logic.

End of Report