

Stock Dashboard Project Report

Introduction

The Stock Dashboard project is an interactive web-based application built using Streamlit. It allows users to visualize stock price trends for various publicly listed companies based on ticker symbols. The tool fetches data from Yahoo Finance and provides a dynamic and user-friendly interface for exploring historical stock data.

Abstract

This project aims to simplify the process of retrieving and visualizing historical stock data. Users input a stock ticker and a date range, and the application fetches and displays the relevant data graphically. The project demonstrates how financial data can be made accessible and engaging through Python and web technologies.

Tools Used

- Python
- Streamlit
- yFinance (Yahoo Finance API)
- Plotly
- Pandas and NumPy

Steps Involved in Building the Project

1. Set up Streamlit page and layout.
2. Add a sidebar for user input (ticker and date range).
3. Fetch stock data from Yahoo Finance using yFinance.
4. Validate and clean the data (handle empty results and multi-index columns).
5. Detect and use the appropriate price column (Adjusted Close or Close).
6. Visualize the data using Plotly line charts.
7. Display the dashboard interactively with error handling.

Conclusion

The Stock Dashboard project showcases the integration of data science and web development using Python.

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It provides a simple yet effective way for users to track stock performance, and serves as a solid foundation for more advanced financial analytics tools in the future.