




Investor Financial Dashboard

University of Toronto SCS - Data Analytics
Final Project

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Investor Financial Dashboard

Product Overview

An Interactive Financial Dashboard for users who are interested in obtaining stock financial insights from the top ten financial institutes trading on the Dow Jones.



The visual representation of the top 10 US Financial Institutes companies Stock data. A user will be able to interactively use the dashboard to compare stock to the current market. To view price prediction from two machine learning model ARIMA/Prophet and Decision Tree/Random Forest. The user will also be able to view the top 5 company twitter feed. The overall dashboard will provide informative investments.

The top ten financial institutes:

1. Citizens Financial Group (ticker: CFG)
2. Morgan Stanley (MS)
3. CME Group (CME)
4. JPMorgan Chase & Co. (JPM)
5. Goldman Sachs Group (GS)
6. PayPal Holdings (PYPL)
7. Berkshire Hathaway (BRK.A, BRK.B)
8. U.S. Bancorp (USB)
9. Interactive Brokers (IBKR)
10. American Express Co. (AXP)

Data Source

- Twitter Company pages
- Yahoo finance data scrape
- Alpha Vantage API.

Machine Learning Models

- ARIMA and Facebook Prophets
- Decision Tree and Random Forest

URL's:

- https://www.alphavantage.co/query?function=TIME_SERIES_DAILY_ADJUSTED&symbol=<sticker>&outputsize=compact&apikey=<api_key>
- <https://ca.finance.yahoo.com/>
- <https://Twitter.com/<ticker>>
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Details

- Using API calls to pull the data and loaded into a Postgres database on Azure cloud.
- Use flask to route the various function calls
- Use machine learning to prediction the underlying
- HTML Visualization of the data
- Using Flask for navigation routes
- User will be able to lookup company info details visually

Specifications

Python, Pandas, Postgres, Json, HTML, JavaScript, Plotly, D3, Leaflet, bsoup, jupyter notebook, splinter (browser), request, PowerBI