***Tiingo API***



Stock price data for each company

***Financial Modelling Prep API***

**COMMODITIES TAB**

1. Commodities daily data: commodities chosen for predictions include Gold, copper, lithium, palladium and silver. These matter for the tech stocks for various reasons explained below

**TECHNICAL INDICATORS TAB**

1. Daily data for technical indicators on each company include ADX, DEMA, EMA, RSI, SMA, TEMA, WILLIAMS, WMA and STANDARDDEVIATION

**MARKET PERFORMANCE TAB**

1. Sector historical performance.
2. Sector PE ratio

**NEWS TAB**

1. Stock news
2. Press release news
3. Historical social sentiments (twitter data)

**ECONOMICS DATA TAB**

1. Treasury rates
2. Economic indicators: inflation rate

**FOREX TAB**

1. Forex daily data: data for currencies chosen relative to USD include CAD, CHF, CNH, EUR, GBP, JPY and KRW



**MODEL ESTIMATIONS**

1. First attempt on LSTM model
2. Other attempts on models including ARIMA, GRU and Black-Scholes model.
3. Ensemble models
4. Evaluating and comparing models

**NEWS TAB**

1. Aggregate each news type to daily data (there are many instances/rows for each day).
2. Combine each news type into one csv file for each company.

**DATASETS MERGING**

1. Combine all datasets (stock price, news, forex, market performance, commodities, economics and technical indicators) by date for each company separately.
2. Include Nvidia features (exact features are Nvidia’s prices (high, low, open, close) and news sentiment about Nvidia) into each company’s final dataset.

**A diagram of a website

AI-generated content may be incorrect.**

**DATASETS REQUIRED FOR EACH COMPANY**

1. Stock price datasets.
2. Merged technical indicators.
3. Complete news data (includes news, press releases and social sentiments).
4. Forex datasets.
5. Commodity datasets.
6. Treasury rates dataset
7. Inflation rates dataset
8. Sector\_pe\_ratio dataset
9. Historical\_sector\_performance dataset.