Project Description

This project leverages recurrent neural networks to predict stock prices by analyzing a broad set of features, including fundamental market data, macroeconomic indicators, and technical factors. The model is designed to capture the complex, volatile, and nonlinear nature of stock market behavior, providing predictions based on historical data from sources such as NASDAQ, NYSE, Nikkei, and FTSE. Additionally, the project incorporates sentiment analysis from news headlines and Google Trends data to provide a more holistic view of market sentiment and enhance predictive accuracy. The goal is to provide a robust, user-friendly tool that allows users to input a date range for stock purchase and sale predictions while comparing multiple data sources.

Target Users

- **Stock Investors**: Investors who wish to make data-driven decisions by using machine learning models to predict stock price movements based on historical and technical data. This tool helps investors optimize their buying and selling strategies in volatile markets.

- **RNN Researchers:** Academics and researchers in machine learning and finance can use the tool to compare model predictions with other forecasting models, contributing to the field of quantitative finance and improving predictive models in stock forecasting.