**Trendr Project Charter**

**Team Members:** Logan Sweeney, Alan Bare, Benjamin Fang, Jake Baker, Jack Lawrence, and Daniel Fruland

**Project Title:** Trendr

**Problem Statement:**

Trying to predict the stock market has been attempted many times to varying degrees of success. One way of predicting stock market trends is to predict the general public’s opinion on the future of a particular stock. This has become easier with the advent of social media. Trendr will attempt to measure the level of attention stocks are getting on platforms such as Facebook, Twitter, and Reddit. Trendr will then interpret the data gathered and create a feed for the user, alerting them if one of their “watched” stocks is currently trending. In addition, the homepage of Trendr will provide users with a basic feed of the most volatile stocks of the day.

**Project Objectives:**

1. Make a profile system where users can add stocks to a watchlist
2. Analyze trends from social media platforms to develop a metric rating the public’s opinion of a stock/company
3. Create a dashboard outlining a user’s watchlist and the stock’s corresponding trend data
4. Homepage with trending stock tickers and the day’s largest risers and fallers in terms of public opinion

**Project Deliverables:**

1. Web application:
   1. Frontend application in React.js
   2. Server that runs the algorithm and handles requests (Python)
   3. Database to store all the user information and trend data (MongoDB)
2. Background Analytics
   1. Algorithm that determines and quantifies trends
   2. Locally hosted computations and analysis at a set time interval for all stocks
   3. Process for sending analytical data from local machine to web app

**Stakeholders:**

1. Users: Any owner of stocks and/or person interested in the stock market
2. Developers: Logan Sweeney, Alan Bare, Benjamin Fang, Jake Baker, Jack Lawrence, and Daniel Fruland
3. Project manager/Coordinator: TBD
4. Project owners: Logan Sweeney, Alan Bare, Benjamin Fang, Jake Baker, Jack Lawrence, and Daniel Fruland

**CS 307 Projects:**

* **Logan Sweeney (Rout)** [**https://github.com/LoganSweeney27/Rout**](https://github.com/LoganSweeney27/Rout)
  + Rout used an existing Google Maps API to generate running loops given a specified location and distance to travel. These loops, or Routs, could be analyzed and saved by the user for future use. The time it takes a user to complete a rout could be compared to previous rout times or the average running speed of famous runners among other utility features.
* **Alan Bare (Hammer Time)**
  + Github: <https://github.com/purduehammertime/HAMMER_TIME>
  + Hammer Time is a calendar and social network for students and campus organizations to create and manage events. It is a way to keep track of important dates, activities, and connect with peers that are joining certain activities.
* **Ben Fang (Boiler Bazar)** [**https://github.com/wang4621/boilerbazaar**](https://github.com/wang4621/boilerbazaar)
  + Boiler Bazzar is a textbook selling site for Purdue students to buy, sell, and search textbooks. It allows buyers and sellers to chat and safely make a transaction. Prices from other websites are also displayed for users to compare. This is done with online retailers’ APIs.
* **Jack Lawrence (Purdue Circle)** [**https://github.com/jlewix/purduecircle**](https://github.com/jlewix/purduecircle)
  + Social network with text and image posts as well as followable hashtags.
* **Jake Baker (Boiler Exchange)** <https://github.com/Boiler-Exchange>
  + Boiler Exchange is a React app that was created as a marketplace for Purdue students and faculty to buy and sell items in a safe and secure manner. A person must have a valid Purdue email address to be able to purchase or post items which may include textbooks, calculators, lab goggles, etc. It also includes a chat feature between people and a scraper to see if the item could be purchased for cheaper from another vendor such as Amazon.com.
* **Daniel Fruland (Roadtrip Games)** <https://github.com/ConTejas624/307-roadtrip-games>
  + Roadtrip games is an Android app we built using the Flutter framework for front end and Firebase for back-end data storage. The purpose of the app was to give an organized way of keeping score when playing roadtrip games such as the license plate game. We only had time to implement functionality for the license plate game where you try identify license plates on cars from all fifty states. We still made a lot of progress giving in-game chat functionality, score keeping, team games, MLkit functionality for image recognition, and other features that would make the game fun for Play store users in the future.