Overview

The client

Our client Daniel Jones is the webmaster for the Computer Science society at the University of Bristol. The CSS helps to make being a student fun by hosting many events/activities you can engage in alongside your course. Over the years, they have successfully hosted many competitions such as Game Jams, Hackathons and Capture The Flags. Daniel plays a leading role in the organisation and managements of these events. Therefore, he often has the difficult task of generating new ideas for competitions and events to ensure the members are enjoying the society.

The Application Domain

Despite hosting a multitude of different events, the CSS is looking to host even more creative events and are interested in hosting one which involves trading. They envision a simulated stock market to which teams of 4 can come up with different algorithms and techniques in investing to generate as much money as possible. The application should be fun and entertaining to play but realistic enough that the students can develop a set of skills in the context of algorithmic trading. There should be a competitive element which will allow a certain team to win and receive a prize for their success.

The Problem

Due to the coronavirus outbreak, there are severe limitations to events that can be held in person according to the university’s guidelines. Being unable to see friends or join many university events has made it an even tougher year for everyone. An event hosting a trading competition using our application would be quite refreshing and extremely convenient for both the CSS and users partaking.

Furthermore, the CSS face challenges with thinking of creative and entertaining ways to promote joining the computer science society at events such as university open days. For the society to keep running successfully, consistently bringing in new members each year is vital. Having such an application available to host on such days would help with this issue by giving new students a taste of what enjoyment is in store when joining the CSS.

Our vision for the product

We aim to create a system that is easy to use for both the pupils, who will be creating/updating the trading algorithm and carrying out the trades, and the CSS committee members who will be managing the program and analyse player performance to determine winners.

The users can carry out almost everything they would be able to if they were trading in real life over a web-based interface. They can buy, sell, short, and cover stonks as well as being able to view the progress of their bot using a bot skeleton program provided. They will also be able to view how individual stonks are fluctuating in value by interacting with the stonk market and viewing their graphs.

To promote realistic elements of the stock market, we will be implementing A.I. computer bots which will also be making trades along with the students. These trades will be affecting the stonk market adding volatility helping it become more realistic. This should also further add to the enjoyment of the system whilst allowing more refined skills to be developed.

To add extra entertainment into the system we will have events which could greatly alter the prices of a range of stonks whether positively or negatively. These will be implemented in the form of a newsfeed providing breaking news about certain stonks, thus adding a sense of thrill when playing the game. Furthermore, they will be able to monitor other players progress to further add to the competitive element.