MCIT 591 Final Project Proposal

Team members: Newman Ilgenfritz, Chris Payne, Jhordan Figueroa

Project idea:

Our idea is to create a ML algorithm that can utilize live trading data through a stochastic oscillator indicator and then print to the console profitable trading solutions.

Breakdown:

1. Assigned to: Newman Ilgenfritz

Import live trading data into Java. We will have to use a third-party data provider for this and maybe an api. <https://github.com/charles-cooper/idylfin> or we use excel as our interface for importing live data <https://riskmanagementguru.com/real-time-stock-prices-excel.html/> and then have Java read and utilize the excel file as prompted by the user.

Assigned to: Jhordan Figueroa

1. Implement back testing of imported data on a specific stock or S&P ETFs, etc.…This includes creating a way for the algorithm to read historical trading data.

Assigned to: Chris Payne

1. To back test, we pick a technical indicator, scan the historical data with it, and print out the results. We can do this by coding the mathematical formula of our chosen indicator into Java.

Assigned to: All of us

1. Using ML (WEKA or MALLETT libraries work best for prediction) <https://jaxenter.com/top-5-machine-learning-libraries-java-132091.html>, we then use **time series prediction** as our main function to print out possible future entry and exit points. However, this would need a considerable amount of data to back test with (more than imported live), so we only use historical data for this. We can get the historical data from third parties. Once the algorithm is functional, we run it using the live data feed through the API or excel and print where it executes. The feed will most likely have to be 5- or 1-minute candles. Then, we output the execution, test it in our trading platforms and see if it was profitable or not. If not, we adjust parameters of the indicator.