ITCS 6112-090

Software Systems Design and Implementation

Assignment IV

Project Proposal

**Name**: Ara Chung, Gavin Sidhu, Abdullah Azihan, Chia Omotosho, and Dez Williams

**Project Title**: Coattails

**Team leader**: Desmond Williams(dwill230@uncc.edu)

**Team profile**:

Gavin Sidhu

Programming(Python, Java, SQL), Data Analytics/Science, Data Visualization)

Ara Chung

Programming (Java, GML, JSON, SQL, Python, C, C+, html, css), Design, Management, Organization

Abdullah Azihan

Programming( C++, Python, Java) ), (Machine Learning, Computer Vision)

Chia Omotosho

Programming(Python, Java, JSON), Data mining, Data visualization, Design

Dez Williams

Programming(C,C++,Python,html,css), Machine Learning, Mathematics, presentations)

**The proposed project description should include the following:**

1. Statement of the goal

Produce software that can predict market trends based on portfolios. We would like to create software that can collect public portfolios, like senators’ portfolios, and recommend stocks that are predicted to do well. The prediction of trends will be for the time period that is to be determined.

1. List of the services to be provided by the proposed system (describe each service very briefly) For every feature, state whether you will write the programs to support it, or you will use existing programs. For example, if you state: The system will provide search facilities, will you write the program to perform the search, or you plan to use existing software?

* Visually displaying our aggregate data on congress person trading behavior to be easily digested
* Visually display the predicted market trend in a digestible format.
* A location to search for a portfolio.

1. Description of the programming part of your project. Explain what kind of data processing/analysis you will do. Tell us exactly why we should consider your project as programming. Just saying: The system will provide search facilities, may mean that you are using SQL database calls and doing no programming at all.

* Build a tool(web scraper) to obtain and conglomerate publicly available information on congress members' participation(trades and portfolio performance) in the US stock market.
* Design an algorithm to draw insights and make predictions over our dataset.
* Design an algorithm that compares our “pseudo market” to the actual market performance by assigning predicted value to a trade or set of trades on a scale of 0 - 99%.
* Create a web application to present those insights via recommendations to our end users in an easily digestible and visually appealing manner.

1. Description of the typical system customers

* People who are interested in stock trends, to gain knowledge.
* People who are interested in portfolio behavior and want to understand how certain portfolios will do in the future compared to others.
* People who are interested in starting an investment fund but not sure where to start. They can look at the data and use it to help them start their investment journey.
* People interested in prediction algorithms for comparing the data to other products and methods

1. Mention also if you already have a customer (somebody interested in the end product that you will develop).

At this moment we don’t have investors. However, if we can create well predicted software, then there will be interest. We will inform on the viability and credibility of the system by sharing the results of our accuracy of trend prediction testing. Many people who are interested in stocks or the portfolios of certain companies/people will be interested in using our software. Our software will be useful to anyone since everyone is interested in stocks.