Research Proposal

Introduction

There has been progress in algorithmic trading and using technology in finance. These could benefit many individuals, particularly beginners, with zero or little experience in the stock market or financial backgrounds. Having algorithms that can successfully analyze the data and predict the outcome is useful in many instances.

The objective of the research proposed here is to understand what technologies have been developed in the intersection of finance and technology and analyze which of the algorithms developed is the most accessible and easy to use for beginners that can bring forth the highest return.

The research will include: (1) provide a brief description of what has been used of technology in the financial world, and in particular, the stock market; (2) a brief understanding of existing algorithms, some business and financial concepts, and possible background to how these algorithms came to be; (3) simulating, a few of these algorithms in algorithmic trading and compare these algorithms. Success would be determined by concluding with the algorithm that is most "accessible" and "easy to use" for beginners. The measure will be based on that algorithm's total return and monetary value.

The research is essential because it helps understand existing algorithms, provides easily accessible tools for novices, and compares these technological instances in the financial world. Furthermore, analyzing which algorithm is the most easily accessible for beginners can help establish future technologies that are geared toward people with different skill levels and connections between technology and various industries.

Timeline

The study will be separated into a few components:

1. February: the focus will be establishing and getting the research proposal approved. Then, conduct background research to better understand the algorithms available and the stock market.
2. March: The focus will be on algorithmic trading and the algorithms used by traders
3. April: Emphasize simulating the stock market and conducting tests to see which trade provides the most return
4. May: Working on a presentation and final deliverable

Resources

1. Professor Plancher and Professor Bill (Advisors)
2. Books on Fintech, Algorithmic Trading, and Stock Market
3. Online stock market stimulators
4. A programming language such as python that can conduct data analysis and other summaries