Pinnacle Scholars Summer 2020 Research Proposal

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Research Advisor Department: Financial Engineering

Project Title: SHIFT: Stevens High Frequency Trading Agent Based Modeling

Covid19 Statement: Please contact your mentor and get permission to include this statement in your proposal.

I have discussed the possibility of conducting the research in this proposal remotely (away from the Stevens campus) and my mentor(s) has/have agreed to work out a way to do this so that I can complete the work during the summer of 2020.

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Overall Project Goal:

The overall goal of this project is to implement trading algorithms on the SHIFT system and evaluate their performances. We will also be looking correlation, and identify whether trading more than one asset creates a positive correlation between equity prices or negative, affecting future trading strategy.

List of specific tasks to be accomplished to reach the goal

Approximate timeline to accomplish the specific tasks (remember you have 10 weeks to complete your project)

May-June: Get accustomed with API, research various trading algorithms,

Mid June: implement a trading algorithm and evaluate performance

Beginning July: Run experiment to see the effects of correlation

Mid July and on: Hopefully we achieve some interesting results that we can formally write a paper on

List of special skills you will have to develop or special equipment you will have to learn to use

- Python
- Knowledge of statistics
- Trading Algorithms
- VPN
- API