## Criterion A: Planning

## The Problem at Hand:

For the beginning of this year I worked at a restaurant on the weekends. My manager was great, but she was the assistant manager, and ended up quitting at the beginning of the year. My new boss, the general manager, and I did not get along well at all. I put in my two week notice and after two weeks, I was out of a job. Being a senior in high school is expensive, with prom and other things coming up, so I needed some way to make money. This issue has been exacerbated by some engine troubles I have had with my car that are looking to cost a significant amount of money. Over the past couple of years as I have become better at coding, I have also become increasingly interested in cryptocurrencies. After a relatively lucrative investment in Ethereum, I was hoping to find a way to incorporate crypto currencies into my IA and my attempt at making money. After thinking I also decided that it would be wise to incorporate my intended major in Data Science into the mix, giving me a project based on: earning some money using crypto currency and data science strategies.

## Justification:

Now this is my edge in my trading so I would like to keep it as quiet as possible, but in order to explain my reasoning, I will have to detail it.

Currently, South Korea has decided to isolate them selves from other markets for crypto currency trading. This coupled with the intense attraction to crypto currencies in Korea has lead to a significant margin developing between Korean prices and the outside world. Unfortunately it is nearly impossible to capitalize on this margin due to anti money-laundering laws. Fortunately, if your capital is always in cryptocurrency assets, there are no

concerns. Initially I wrote a simple script in Node.js to test the spreads between Ethereum and Ripple, since both are quick to transfer. After doing some math to calculate the loss from fees, I found that I would need to be trading a margin of 0.7% or higher to be profitable. I am also limited in the amount I can move per month due to withdrawal caps. Based on my testing, spreads were high enough to be traded more times per month than I could trade based on my limits, so I moved onto creating the final product.