**Proposal for COMP 4971C**

1. **Introduction:**

There are a lot of cryptocurrency trading strategies in all kinds of medias. However, it seems that few of them have been proved valid. What this research will do is to investigate some of those strategies and code programs to prove the effectiveness of those strategies by using the historical data. Then combine those proved valid data to form a new algorithm that has the maximum chance to make profit in cryptocurrency trading. If it can be proven valid, then develop a program that automatically do trading in real time and to prove its consistence.

1. **Brief steps:**

Despite there seems to have thousands of different strategies for the cryptocurrency trading, yet they can all be divided into the following steps:

1. Choose a trading pair that can give you most fluency (e.g. the Bitcoin-USD trading pair is a wonderful choice)
2. Identify the current big trend of the market. The most used identifier is the 100-day average growth rate. However, there has been a lot of space to upgrade. For example, is the 100-day average the most profitable standard for trading. It also necessary for the research to using loops to also test other longer or shorter period standard. Also, another arguable point for the project is to discuss whether the linear average is the most profitable way for our program or does other kind of average more useful in such trading (such as averages in AM-GM inequality)
3. Go to the smaller time scale and wait for the one set of up and down candle to touch the BB (in here, we can also using code to test effect for different data when we create the BB) line and then buy-in (or use the buyer and seller line's cross over as the buy-in signal)
4. Sold out when the profit is reasonable. In this part it still need to discuss that when is the best place to do the sold out we can use code to test the historical data to determine the relationship between the best sold out point and the indicate lines to find out the best sold out point.

There are also some other points that still worthwhile to discuss.

First is the trading platform. Since the trade that we focus on is the exchange between Bitcoin and other government issued currency. It is possible that a strategy that valid for one trading platform may just be the other way round for other market. Thus, it is necessary for the research to apply the algorithm in many platforms’ historical data to test the effectiveness.

Another point that the research may able to do is that consider the outer environment. Since policies of government and other major companies has great impact on the value of the bitcoin. If it is possible, add another variable to determine the effect of environment when doing the trading.