**Meeting Minutes, 12 April 2018**

**Milestones:**

1. Formation of group for ML project, submission of project proposals and continued work understanding price/time series relationships as it relates to the cryptocurrency markets
2. Successful first implementation of stat arb algo back-test, obtaining 1.2% return despite overall market downturn

**Next Steps:**

1. Optimize the back-test model with the following trading strategies:
   1. Trigger rules determining both when to buy as well as the magnitude of the position to take based on deviation from the mean or some other feature (for now sticking within the assumed normal distribution framework)
   2. Diversification (multiple account buying and selling rules) thinking about how to enter and exit trades when multiple currencies pairs show deviance and limit the total amount of capital to be consumed (i.e. significant deviation in both Bitfinex/Kraken and gdax/kraken rates might limit or improve the effectiveness of investment strategy in either or both currencies)
   3. Optimizing holding period in order to minimize transaction costs and/or maximize trading profit; key to implementing this strategy is improving entry and exit decisions (likely based on strength of signal for entry requirement and profit minimum or other standard deviation threshold requirement to exit the position)
2. Ensure a more realistic back-test model by accounting/penalizing for transaction costs/spreads and buy-sell waiting times (i.e. time it takes from recognizing a signal to actually owning or shorting the underlying security), also taking into account margin requirements and min balances required by the various exchanges
3. Implementation of ML methods to optimize anomaly detection and arb trade implementation

**To Do List:**

*Andrew*

1. Research transaction costs and waiting times at all relevant exchanges to improve the accuracy of our algo trading model from back-test to real-life implementation
2. Researching margin requirements and other real-life requirements of any algo model

*Justin*

1. Implementing back-test optimization as detailed in next steps section