

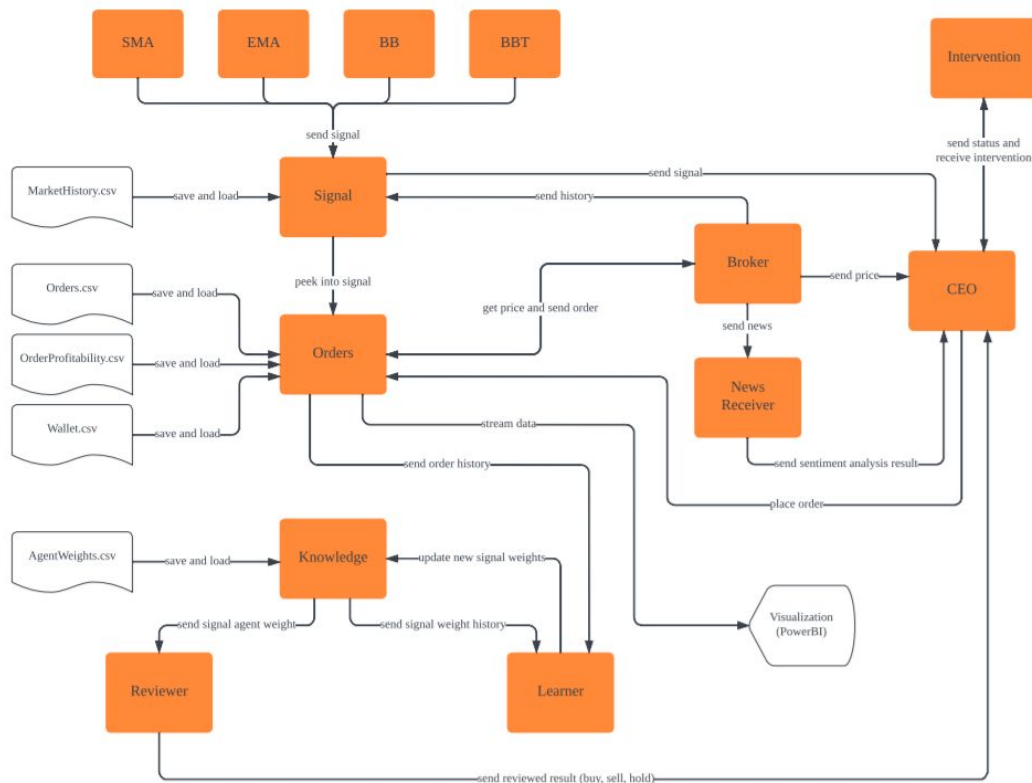
IS5006

Team 3 Excellent

AlgoTrading System Presentation

Jesper Lim Jun Hao (A0248996B) e0934611@u.nus.edu
Pitchappan Pitchappan Ramaswamy (A0236575W) e0740930@u.nus.edu
Zhu Yexin (A0083629W) e0696677@u.nus.edu
Seow Kah Yong (A0032747E) e0383424@u.nus.edu

Flowchart/MAS



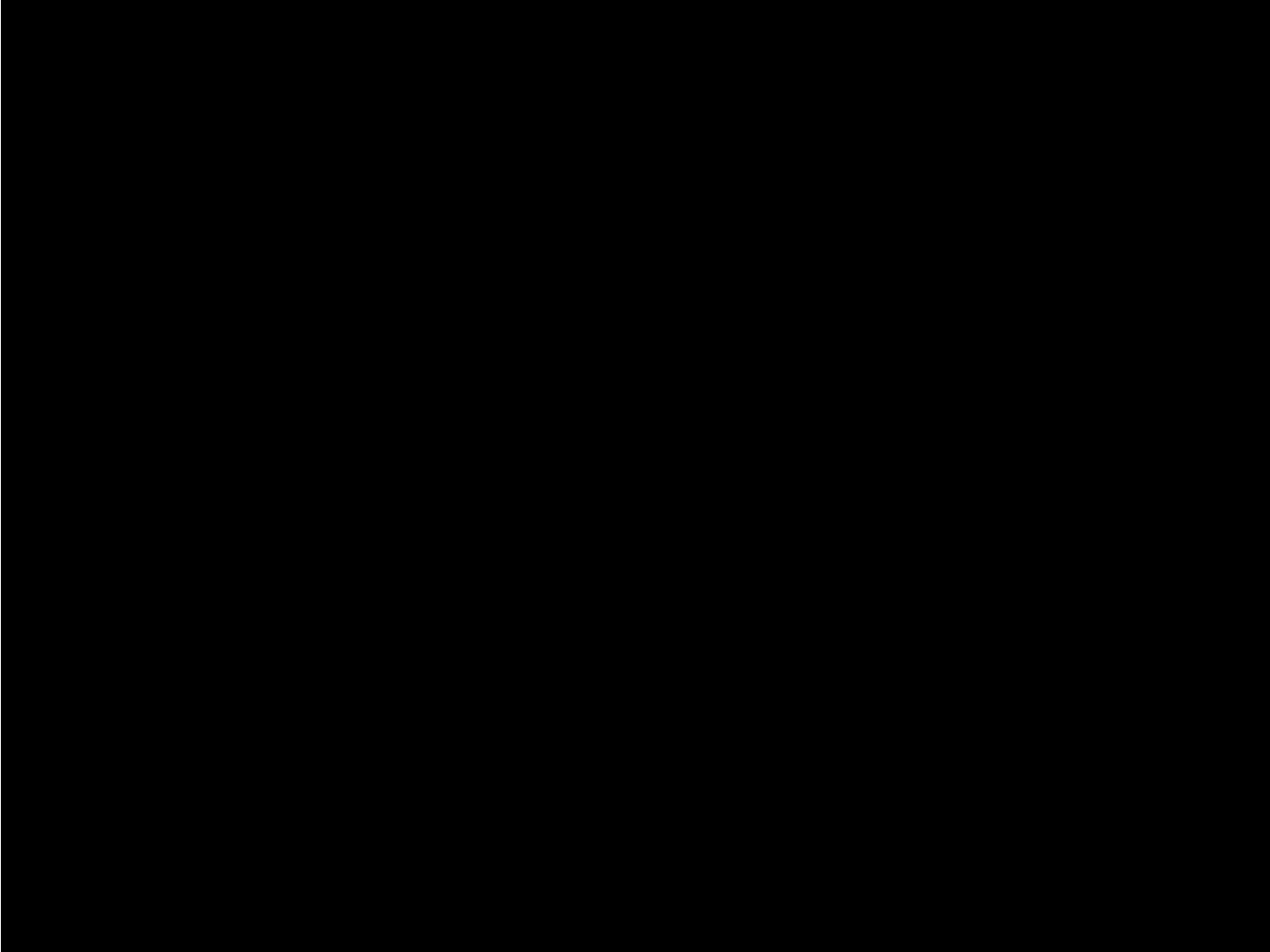
Case Based Reasoning

4 Rs = Retrieval, Reuse, Revise, Retain

We find the number of previous orders executed where the current configuration of signals was profitable and use that ratio to tweak the volume we are going to trade on. Profitability of a trade is based on market movement after a trade was executed.

We also use a similar method to learn which signals to trust and update those weights periodically.

How to Run the System



Human Controls

Change Risk Level

Pause/Resume the System

Force an Order

Pull The Plug

Overview of Algo Trading Performance

10,300.09

PnL (SGD)

Normal

Algo Status

Normal

Description

6

Risk Level

110,300.09

Total Assets (SGD)

99,007.60

Cash (SGD)

11,292.48

Crypto Value (SGD)

0.27

Crypto Amount

25

Total Trades

1,160

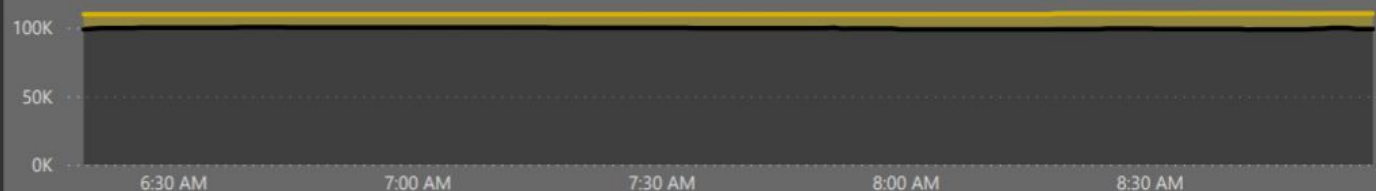
Buy Trades

12

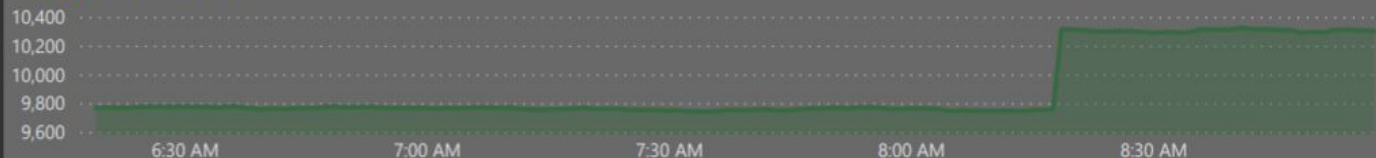
Sell Trades

Cash and Crypto Assets Value Over Time (SGD)

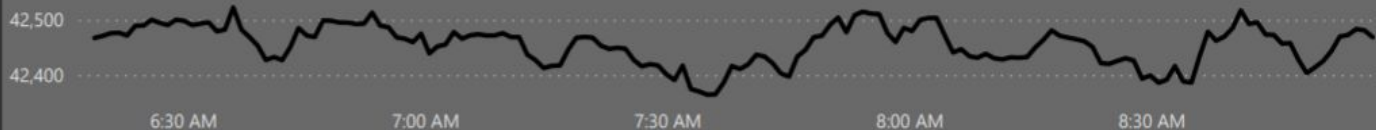
● Cash ● Crypto Value



PnL Over Time (SGD)



Crypto Price Over Time (SGD)



Results

Challenges

1. Low volume, slow limit orders on Alpaca paper trade to test Risk levels 1-3
2. Multi-threading is difficult
3. Algo needs to be fast
 - a. NLP using spacy instead of Google sentiment analysis
 - b. ML models may be slow to use
 - c. Tried to build lighter weight system but outputs only once every minute
4. News sources are scarce (~ 40 articles on BTC daily)

Conclusion

1. Does generate profits sometimes.
2. Depends on the market
3. Strategy adjustment on empirical evidence can be a little schematic

Future Work

1. Implement advanced signals
 - a. MACD
 - b. ML based
2. Use Fuzzy logic, News, current PnL to dynamically change risk
3. Explore better order profitability
4. Explore more advanced CBR
5. Better code structure to directly load history from Alpaca



Scan to access code and guides

-End Of Presentation-
Q&A

