**Algotrading: Developing Algorithms in QuantConnect and Submitting Alpha**

The goal of our project is to develop an intelligent systematic trading system leveraging the fundamentals of investing and algotrading. This trading system would then be licensed or rented to investors for a fee on QuantConnect.

QuantConnect is an open – sources, community driven, algorithmic trading platform. This platform includes analytics capabilities, market data, back testing capabilities, data library and a choice of investment strategies. They provide free access for developers to design trading strategies using their resources while investors pay a small fee to QuantConnect and the licensing fee to the developers. The developers and investors using QuantConnect are based all over the world and collaborate online using [Alpha Streams](https://www.quantconnect.com/alpha) .

As a first step, we investigated QuantConnect and studied Python programming to prepare ourselves for this project. We then carried out a survey of investors based in Singapore to understand:

* Their familiarity with algo trading
* Their concerns about using algo trading
* The types of markets/instruments they were interested in
* Their return expectations.

We researched several approaches to developing short and long term algo trading strategies which met the criteria defined by QuantConnect for AlphaStream. The strategies needed to fulfil amongst others the following criteria.

* Backtest of at least 5 years but no more than 7 years
* Strategy is profitable
* Probabilistic Sharpe Ratio (PSR) greater than 80%
* Does not use external data sources
* Quick drawdown recovery
* Low correlation with other strategies

It was a challenging process to identify and code the strategies which met the criteria. After developing the code, we needed to optimize the strategies by changing some of the strategy parameters to obtain better outcomes. We identified one short term strategy which we believe meets the required criteria. Apart from developing strategies we have also learned about a market place where we can identify, research and select investment strategies for our own capital.