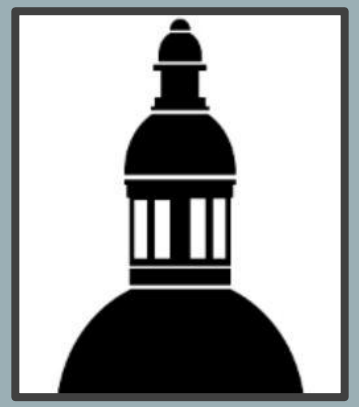

QUEEN'S TOWER CAPITAL

Overview of Engineering Division

Overview

QT Engineering has 7 undergraduate and postgraduate students from Imperial College London

Chief Engineer	Thomas Wong	Bloomberg, Goldman Sachs summer intern MSc in Bioinformatics and Theoretical Systems Biology, Imperial College London BSc in Mathematics, Imperial College London
Senior Engineer	Pierre Moutonet-Cartan	J.P.Morgan spring intern BSc in Mathematics, Imperial College London
	Christopher Macca	J.P.Morgan industrial placement MEng in Electrical and Information Engineering

Overview

Junior Engineer	Sahil Chadha	Arabesque Partners, Baillie Gifford summer intern MSc in Mathematics and Finance, Imperial College London BSc in Mathematics, Imperial College London
	Benedikt Petko	MSci in Mathematics, Imperial College London
	Matthew Ward	BSc in Physics, Imperial College London
	Jeremy E. Brandon Guntoro	MEng in Biomedical Engineering, Imperial College London

What makes us different

- QT Engineering focus on quantitative trading
  - Most student investment societies are focus on fundamental investing
  - Example: University of Texas, Harvard Business School
  - We have both fundamental and quantitative research teams, providing comprehensive insights in making investment decisions

- QT Engineering builds their own infrastructure
  - We build our own database, backtesting engines and workflows
  - We automate our data services and build batch process in generating trading insights from our database with pricing, fundamental and alternative data

Technology

We use python as our main programming language to leverage a vast number of open source projects and packages available for data processing and scientific computation

We have plans to extend to Java and C++ in future for building quicker systems

Data: We use object-oriented model in our research environment

Database: We use MongoDB with Arctic storage engine as our main data store

User Interface: We use Flask and Plotly to build our web application for users

Computation: We use Pandas, Tensorflow, Scikit-learn to build forecast models, trading strategies in our research environment

Projects

- Recent projects
  - Datafeed services using data from Quandl APi, web scraping for new and sentiment data
  - Database of historical pricing data and fundamentals data

- Future projects
  - Web application for research analysts and traders
  - Back-testing engines for multi-asset strategies
  - Distributed real-time risk management system based on graphical database

Evolution of technology

	Individual Investors	**QT Engineering**	Industry
Scale	< 50	**~ 5000**	1,000,000+
Programming languages	Excel VBA	**Python, R**	Java/ C++/ Python
Database	Spreadsheets	**MongoDB, Neo4j**	Apache Hadoop, Postgresql
Data processing	Excel Macro	**Pandas**	Apache Spark
User interface	Manually generated reports in spreadsheets	**Web application based on flask**	Bloomberg terminal

Trading Strategy

Asset class: Multi-asset class global portfolio

Trade frequency: from minute to weekly, mainly on daily

Investment philosophy: automated insights with minimal human intervention

Data: Integration with pricing,fundamental and alternate data to uncover hidden market trends

Models: Quantitative models developed by market observations and data science methods