TIANHAO LU

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EDUCATION

NEW YORK UNIVERSITY New York, NY

The Courant Institute of Mathematical Sciences

MS in Mathematics in Finance (expected – December 2019) *GPA:3.85*

- ***Coursework:*** Time series analysis, Brownian motion and martingales, object-oriented programming, Black-Scholes formula and applications, Interest rate & FX models
- ***Future Coursework:*** Valuation adjustment, credit analytics, statistical arbitrage

IMPERIAL COLLEGE London, United Kingdom

BSc and ARCS in Mathematics with Statistics for Finance (October 2015 – June 2018)

- ***Coursework:*** Real analysis, differential equations, option pricing, probability and statistics, statistical modelling, time series, applied probability, survival modelling
- ***Distinctions:*** Graduated with Ken Allen Prize (5/200), three years dean's list (top 10%)

EXPERIENCE

CoVenture New York, United States

Quantitative Analyst Intern (May 2019 – August 2019)

- Developed strategy on considering trading on cross of crypto assets, applying predictive models and considering capturing profit from both mean reversion and momentum. The cost-adjusted sharpe ratio is 2.9, sortino ratio is 4.7

PARETO TECHNOLOGIES New York, United States

part time: Quantitative analyst (March 2019 – May 2019)

- Performed arbitrage strategy data analytics using python, determined the capacity of the strategy by backtesting and considering market impact and transaction cost

HUA AN FUND MANAGEMENT Shanghai, China

Quantitative Research Intern (June 2018 – August 2018)

- Developed an event-driven strategy, used regression and machine learning methods to construct portfolios with 13% annual return and low leverage by using Python and R
- Implemented Fama-French model into stock market, getting portfolios with neutral beta
- Implemented GARCH model and its family to model volatility of index of the market using R, summarizing applicable scenario for each model

IMPERIAL COLLEGE London, United Kingdom

Research Assistant: Modeling pseudo periodic time series (CO_2 data) (July 2017 – August 2017)

- Used an Autoregressive model to fit CO_2 data by considering its spectrum structure
- Utilized Bayesian methods to determine coefficient of Autoregressive model and compared to built-in function in R, result of these simulations gave a better QQ norm plot

PROJECTS

NEW YORK UNIVERSITY New York, United States

Monte Carlo option pricing (Oct 2018 – Nov 2018)

- Priced European and Asian option by Monte Carlo simulation and used variance reduction method
- Implemented and improved the simulation in parallel processing framework by using ActiveMQ

IMPERIAL COLLEGE London, United Kingdom

Kalman filter and its variant (May 2017 – June 2017)

- Determined the performance of different variants of Kalman filter applied to non-linear mapping
- Wrote a backtesting trading algorithm for European financial data by trading proportional to negative Z-score at high frequency and got 0.1% daily return

COMPUTER SKILLS/OTHER

Programming Languages: Java, Python, R, MATLAB

Other Software: Microsoft Word, Excel, LaTex

Languages: Mandarin (native), English (fluent)