TIANHAO LU
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EDUCATION

NEW YORK UNIVERSITY **New York, NY**
The Courant Institute of Mathematical Sciences. Sep 2018 – Dec 2019 (Expected)
MS in Mathematics in Finance *GPA:3.85/4.00*

- ***Relevant Coursework:*** Time Series Analysis, Big Data and Econometrics, Brownian Motion and Martingales, Object-oriented Programming, Black-Scholes Formula and Applications, Interest Rate & FX models, Valuation Adjustment, Statistical Arbitrage

IMPERIAL COLLEGE **London, United Kingdom**
BSc and ARCS in Mathematics with Statistics for Finance Oct 2015 – Jun 2018

- ***Distinctions:*** Graduated with Ken Allen Prize (5/200); Dean's list for consecutive three years (top 10%)
- ***Relevant Coursework:*** Real Analysis, Differential Equations, Option Pricing, Probability and Statistics, Statistical Modeling, Applied Probability, Survival Modeling and its Applications

EXPERIENCE

COVENTURE **New York, NY**
Quantitative Analyst Intern May – Aug 2019

- Developed a trading strategy with predictive models by considering mean reversion and momentum for numerous crypto assets; significantly enhanced the profitability and improved cost-adjusted Sharpe ratio and Sortino ratio
- Challenged daily performance of individual crypto asset to refine insights into market behavior and improve the investment strategies

PARETO TECHNOLOGIES **New York, NY**
Quantitative Analyst – Part Time Mar – May 2019

- Implemented an arbitrage strategy using Python by synthesizing industry data and analytical techniques;
- Modeled the volume impact based on the market impact and the transaction cost; conducted backtesting to assess the capacity of the strategy

HUA AN FUND MANAGEMENT **Shanghai, China**
Quantitative Research Intern Jun – Aug 2018

- Developed an event-driven strategy to construct portfolios with 13% annual return and low leverage with machine learning methods by using Python and R
- Applied GARCH model and its extensions to model volatility of index of the market using R; evaluated the model performance and summarized its applications

IMPERIAL COLLEGE **London, United Kingdom**
Research Assistant: Modeling Pseudo Periodic Time Series. Jul – Aug 2017

- Fitted an Autoregressive model for pseudo UK monthly CO2 data by considering its spectrum structure
- Utilized Bayesian method to estimate the coefficients of the Autoregressive model; and outperformed the results generated with the built-in function in R, by comparing the QQ norm plots of the two methods

PROJECTS

- ***Deep Learning in Option Pricing:*** Used deep learning techniques to solve the high dimensional linear and non-linear option pricing pde and produce lower and upper bound for the price, greatly accelerated the speed of the algorithm compared to traditional finite difference method.
- ***Kalman Filter and Its Variants:*** Evaluated the performance of different variants of Kalman filter and applied them to non-linear mapping; initialized a trading backtesting algorithm by trading proportional European financial data with negative Z-score at a high frequency rate and obtained an average 0.1% higher daily return than the actual; won the "Best Project" of the year out of 50+ teams.

SKILLSETS

Technical Skills: Python, R, MATLAB, Java, MS Office Suite (Advanced), LaTex
Languages: Mandarin (native), English (fluent)