XUJIA LIU

601 W 113TH ST, 2H, New York, NY 10025
347-757-9571 | xujia.liu@columbia.edu

EDUCATION

Columbia University New York, NY
PhD Candidate in Operations Research *Expected Sep. 2018 – Aug. 2022*

- GPA: 4.0/4.0
- Coursework: Bayesian Model Machine Learning, Reinforcement Learning
- Course project: Applied reinforcement learning to two-player Texas Hold'em Game.
- Ongoing research:
    - Tax-Loss Harvesting and Index-Tracking Portfolio Optimization
    - Multi-item Two Echelon Distribution System

Master of Science in Financial Engineering Sep. 2016 – Dec. 2017

- GPA: 4.0/4.0
- Coursework: Continuous Time Asset Pricing, Machine Learning, Monte Carlo Simulation Methods, Data Analysis

The Chinese University of Hong Kong Hong Kong
Bachelor of Engineering with First Class Honor Sep. 2009 – Jul. 2013
Major: Systems Engineering & Engineering Management (Financial Engineering Stream)
Minor: Mathematics

- Major GPA: 3.77/4.0
- Honors (to top 5% students)**:** College Head's List, Dean's List, HSBC Scholarships

University of Illinois at Urbana-Champaign Urbana, IL
Exchange Program in Industrial and Enterprise Systems Engineering Jan. 2012 – May 2012

- GPA: 3.93/4.0

ACADEMIC AND PROFESSIONAL EXPERIENCE

Columbia University New York, NY
Summer Research, Department of Industrial Engineering and Operations Research May. 2017 – Aug. 2017

- Worked with professors and Goldman Sachs Asset Management team on a tax-aware index tracking project.
- Implemented Python code base for testing model performance using Monte Carlo simulation.
- Reformulated optimization problem and enhanced simulation efficiency by at least 5 times.
- Researched on variance reduction technique and achieved a reduction factor of 4 through importance sampling.

CASH Algo Finance Group Limited (Prev. CASH Financial Services Group Limited) Hong Kong
CASH Talent Investment Department Jul. 2013 – Jul. 2016
Quantitative Developer (Jan. 2015 – Jul. 2016)

- Researched and developed a momentum arbitrage strategy trading on over 20 China commodity futures, with realized annualized return over 100% and Sharpe Ratio over 2 in the first half of 2016.
- Optimized existing trading strategies; improved live performance of one strategy with loss to Sharpe Ratio over 4.
- Enhanced in-house back-testing system developed in C++ and Scheme; implemented cross-markets/products trading strategies framework.

Junior Programmer (Jul. 2013 – Dec 2014)

- Conducted research on commodity, index, and bond futures in over 20 global exchanges; designed, built, and maintained database to store reference data of corresponding contracts.
- Developed Python applications in Linux environment to retrieve daily market data of over 500 tradable products.
- Monitored real time trading and manually covered unhedged positions in case of trading system failure.

SKILLS

Certification: Certified Financial Risk Manager (FRM)
Technical: C/C++, Java, Python, Shell, MATLAB, R, SQL
Interests: Swimming, Tennis, Chess, Painting, Golf, Poker