

# Peter Lei

[website](#) | [hylei@uchicago.edu](mailto:hylei@uchicago.edu) | [github](#)

## EDUCATION

---

### THE UNIVERSITY OF CHICAGO

Chicago, IL

Master of Science in Financial Mathematics, GPA 4.00/4.00

Expected December 2021

- Current Courses: Analysis of Financial Time Series, Modern Methods in Applied Statistics, Advanced Computing in Finance, Fixed Income Derivatives
- Completed Courses: Mathematical Foundations of Option Pricing, Numerical Methods, Portfolio Theory and Risk Management, Probability and Stochastic Processes, Stochastic Calculus, Optimization, Python

### THE UNIVERSITY OF HONG KONG

Hong Kong

Bachelor of Engineering in Computer Science, GPA 3.61/4.30

July 2020

- Courses: Data Structures and Algorithms, Database Management Systems, Probability and Statistics, Differential Equations, Numerical Analysis, Econometrics, Empirical Asset Pricing, Fixed Income Securities, Derivatives
- Extracurricular: Project Leader for Beyond the Pivot – recruited and trained volunteers, coordinated with local education department, and instructed primary and secondary students for a volunteer teaching program

### THE UNIVERSITY OF CALIFORNIA, IRVINE

Irvine, CA

Visiting Student, Major in Computer Science, GPA 4.00/4.00

January 2018 – June 2018

- Courses: Design and Analysis of Algorithms, Machine Learning and Data Mining, Parallel and Distributed Computing, Multivariable Calculus, Linear Algebra

## SKILLS

---

**Computing:** Python, R, SAS, SQL, C++, Jupyter, Java, Unix/Linux, L<sup>A</sup>T<sub>E</sub>X, MS Office

**Knowledge:** Machine Learning, Regression Analysis, Software Development, Portfolio Analysis and Optimization

**Other:** CFA Level 2 Candidate, GRE (Quant: 170/170, Verbal: 163/170), TOEFL (111)

## EXPERIENCE

---

### KUBID RESEARCH

Hong Kong

Summer Quantitative Researcher

June 2019 – August 2019

- Collected data with Python from SEC EDGAR for over 70 US equities; built SQL database
- Back-tested and improved market-neutral, statistical arbitrage strategies in R; identified 10+ alpha-generating stocks
- Automated and documented data collection and back-testing processes

### JPMORGAN CHASE

Hong Kong

Summer Technology Analyst, Equity Derivatives Group

June 2018 – August 2018

- Designed logging message patterns and implemented logging message aggregation in Spring Boot microservices
- Researched, presented to teammates, and documented the use of Splunk to search for logging messages
- Processed over 10,000 request-for-quote emails using VBA

## RESEARCH

---

### THE UNIVERSITY OF HONG KONG

Hong Kong

Research Assistant, Faculty of Business and Economics ([Project link](#))

September 2019 – August 2020

- Replicated 60+ anomaly portfolio returns in SAS with portfolio sorts and Fama-MacBeth regressions; anomalies span momentum, investment, value-versus-growth, profitability, intangibles, and frictions

A REVIEW OF MEAN-VARIANCE OPTIMIZATION METHODS ([Paper link](#))

February 2020 – May 2020

- Reviewed and back-tested 6 portfolio mean-variance optimization methods, including sample covariance matrix, graphical lasso, and industry factor model across Fama-French portfolio and individual stock datasets
- Evaluated portfolio out-of-sample performance with 5 metrics, including standard deviation and Sharpe ratio

## ADDITIONAL INFORMATION

---

**Languages:** English (fluent), Mandarin (native), Cantonese (native), French (elementary)

**Interests:** Volunteer work, jogging, swimming, reading, singing