

Yuting (Lauris) Li

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EDUCATION

The University of Chicago

Chicago, IL

Master of Science in Financial Mathematics

Expected December 2026

- Courses: Portfolio Theory & Risk Management, Python, Option Pricing, Probability & Stochastic Processes

Shanghai University of Finance and Economics

Shanghai, China

Bachelor of Science in Financial Mathematics

June 2025

- Courses: Stochastic Processes, Data Structures and Algorithms, Partial Differential Equations, Numerical Analysis, Convex Optimization, Machine Learning, Advanced Probability Theory
- Awards: Top 5% Honors; Outstanding Youth Scholarship, Outstanding Teaching Assistant Scholarship

SKILLS

Computing: Python (PyTorch, Numpy, Pandas), C++, Jupyter, MATLAB, Linux, Stata, LaTeX, MS Office

Knowledge: Financial Markets, Machine and Deep Learning, Statistical Modeling, Data Analytics

EXPERIENCE

Huatai-PineBridge Fund Management Co. Ltd.

Shanghai, China

Quantitative Researcher Intern

August 2024 – March 2025

- Designed high-frequency trading model for government bond futures using temporal CNN to achieve 63% hit ratio in firm bargain
- Investigated and refined loss functions by implementing a variant of focal loss to improve model prediction accuracy, replacing original cross-entropy loss to increase pixel-level accuracy by 12% and F1-score by 0.14
- Created dynamic investment allocation model based on drawdown-controlled strategy for government bond futures market; maintained Sharpe ratio above 1.5 under volatile market environment of Q2 2024

Guotai Haitong Futures Co., Ltd.

Shanghai, China

Quantitative Researcher Intern

January 2024 – June 2024

- Designed and back-tested 3 treasury bond futures factor strategies with Sharpe ratio > 2.0 using machine learning techniques including screening factors, rolling range construction, and stop-loss order design
- Created regression algorithm to derive fund duration from index duration by replacing linear regression with residual regression and cluster, enhancing accuracy by 18% with benchmark of interest rate volatility indicator
- Published research report discussing hedging strategies of bank perpetual debts, corporate bonds, and municipal investments with bond futures, reducing drawdown by 8% in back-testing from Q4 2022 to Q1 2024

RESEARCH

MIT Sloan School of Management

Boston, MA

Western Africa Slums Detection with CNNs

March 2024 – Present

- Leading a team of 5 undergraduate Research Assistants to develop and benchmark 7 CNN architectures
- Engineering two UNet-CNN pipelines to learn and predict slum area and growth patterns through satellite images and fine-tuning model using different clustering methods over more than 100,000 labels
- Analyzing effects of preprocessing datasets based on inference results and using insights to write several algorithms on Linux server to improve performance by selecting training datasets, improving F1-score by 0.25

The University of Hong Kong, HKU Business School

Hong Kong SAR, China

Dupire Algorithm-Based Physics-Informed Neural Networks in Option Pricing

July 2024 – February 2025

- Constructed Physics Informed Neural Network with Dupire local volatility framework to price European SPX options, achieving 36% MSE reduction versus BSM model and enhancing pricing accuracy for risk-management

EXTRACURRICULAR

Shanghai University of Finance and Economics

Shanghai, China

Lecturer and Founder, Applied Mathematics Academic Exchange Center

February 2023 – June 2025

- Organized and delivered lectures and Q&A sessions on real analysis and probability with 100+ student participants

ADDITIONAL INFORMATION

Languages: Mandarin (native), Japanese (basic), Spanish (basic)

Interests: Piano, hiking, swimming, volunteer work, rock climbing