# Fred H. Li

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#### **EDUCATION**

### Washington University in St. Louis (WashU)

St. Louis, MO, USA

M.S. in Finance, Quantitative

Sep 2023 – Dec 2024 (Expected)

- **GPA**: 3.95/4.00, Rank 2/89
- Honors: All-semester Dean's List, Beta Gamma Sigma Award, Charles F. Knight Scholar (Expected)
- Coursework: Continuous-Time Finance (Ph.D. Level), Stochastic Calculus, Exotic & Fixed Income Derivative Pricing, Asset Pricing, Python and R Machine Learning, LASSO, SQL, Quantitative Risk Management, Corporate Finance I & II

#### The University of Hong Kong (HKU)

Hong Kong

B.S. in Economics and Finance

Sep 2017 - May 2021

- GPA: 3.41/4.00, Rank top 35%, Awarded 2:1 Distinction and HKU Reaching Out Award (C.V. Starr Scholarship)
- Admitted based on achieving a top 0.4% province-ranking (143<sup>rd</sup> / 400,000) in National College Entrance Exam (Gaokao)

## Institut d'Études Politiques de Paris (Sciences Po)

Paris, France

Scholarship-Awarded Exchange Student

Jan 2020 - May 2020

### PROFESSIONAL EXPERIENCE

## Washington University in St. Louis, Olin Business School

St. Louis, MO, USA

Research Assistant (Post Grant)

May 2024 – Present

- Overview: Data scientist to process a novel U.S. congressional hearing database and develop data solutions to enhance usability
   Conducted time-series analysis to identify a direct link between UK government-vs-media fiscal sentiment shocks and asset price changes, addressing omitted variable bias (OVB) by isolating sentiment effects from broader economic conditions
- Developed a Selenium web scraper to extract data from social media and news databases, improved sentiment classification through BERT and sub-model fine-tuning, transforming it into a key resource for quantitative research

#### **Privium Fund Management**

Hong Kong

Portfolio Manager

Apr 2022 – Dec 2022

Overview: Co-managed US\$ 200M AUM options selling strategy, overseeing algorithmic trading and risk management

- Executed options selling strategy on index options, minimizing slippage and maximizing premiums with algorithmic trading
- Integrated transaction costs, stop-loss mechanisms, and market impact analysis to ensure accurate performance metrics
- Applied risk models (Barra, Black-Litterman, Axioma, Greeks) for portfolio optimization and ensuring risk alignment
- Managed liquidity and order book dynamics, performed portfolio stress testing to ensure portfolio robustness

Yong Rong Asset

Hong Kong

Junior Trader

Jun 2021 – Jan 2022

Overview: Research-focused buy-side trader at a fundamental high-conviction macro sub-fund with US\$ 30m AUM

- Participated in trading activities, maintained the firm's trading and reporting scripts to support execution
- Produced comprehensive research memos for U.S. space exploration, remote sensing, and Hong Kong machinery sectors

## **Peak Global Investments**

Hong Kong

Private Equity Intern

Sep 2020 – May 2021

Overview: Research, due diligence-focused intern while contributing to the firm's crypto and DeFi proprietary trading strategies

- Researched cryptocurrency exchanges across Asia and Europe, liaised with senior executives to prepare for acquisitions
- Collaborated with world's largest crypto exchange, utilized API to assess targets' trading volumes and their authenticity

## RESEARCH & PROJECT EXPERIENCE

## Microstructure-Informed High-Frequency Trading Strategy

St. Louis, MO, USA

Trading Strategy Design

Oct 2024 – Present

- Currently developing a proprietary high-frequency trading (HFT) strategy leveraging market microstructure analysis to predict immediate price movements and execute rapid trades in the U.S. equities market
- Predicted short-term price movements, optimized code for low-latency execution, back-tested using high-frequency dataset

## **Research on PEVC-backed Companies**

Ithaca, NY, USA (Remote)

Research Assistant under Prof. Minmo Gahng (Cornell University)

Mar 2024 – Oct 2024

 Developed scalable TF-IDF-based fuzzy matching solution for large datasets, utilizing custom cosine similarity with sparse matrices, variable-based blocking, and automated best-match selection to ensure high accuracy and performance

## **Hull-White Model Calibration for At-the-Money Caplets and Caps**

St. Louis, MO, USA Mar 2024 – May 2024

GitHub Repository: github.com/fredhli/Hull-White-Caplet-Calibration

• Implemented theoretical and simulation-based pricing functions, optimizing model parameters against market data, and producing a 15-page executive report with detailed analysis of model fit and limitations in fixed income derivatives

## ADDITIONAL QUALIFICATIONS

**Teaching** TA for: Options, Futures and Derivative Securities (Undergraduate); Behavioral Finance (Graduate)

Volunteering NGO Marketing Director, Soap Cycling HKU; Volunteer Teacher, Beyond the Pivot HKU

**Certificates** CFA Level I, HKSFC Type-9 Asset Management License

**Programming** Proficient in Python, R, SQL, Git, Microsoft VBA, LaTeX; Intermediate in Stata, MATLAB Work Permits Hong Kong SAR (Permanent Citizenship), Canada (OWP with Citizenship Assurance), USA (OPT)