Leon Lu

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EDUCATION

Columbia University New York, NY
M.S. Financial Engineering Sep 2023 – Dec 2024

- Relevant Coursework: Optimization, Monte Carlo Methods, Asset Pricing, Reinforcement Learning

Columbia University (GPA: 3.86/4.0) New York, NY
B.A. Applied Mathematics, B.A. Statistics Sep 2019 – May 2023

- Relevant Coursework: Probability Theory, Statistical Inference, Machine Learning, Data Structures, Modern Analysis, ODEs, PDEs, Stochastic Processes, Linear Regression, Time Series Analysis.

PROFESSIONAL EXPERIENCE

Goldman Sachs New York, NY
Quantitative Strategist Mar 2025 – Nov 2025

- Derived and implemented a novel strategy for calibrating the local volatility model by using an analytical parametrization of implied volatility in conjunction with Dupire's formula.
- Backtested by simulating asset dynamics under different local volatility models and recovering terminal implied vols via inverse Black–Scholes, achieving production-level accuracy with ~25% of the original grid resolution when benchmarked against the existing model.
- Ran diffusions using proprietary Monte Carlo engine to test new methodology on the single-stock level and on a book level. Generated plots and data for various stakeholders to illustrate the improved fitting of the implied vols resulting from the analytical local volatility model.

Quantitative Strategist Intern Jun 2024 – Aug 2024

- Developed extension to correlation skew model bump calibration, allowing for calibration procedure to account for term structure of options.
- Built a tool to help traders better visualize impact of different volatility market models on expected spot distributions. Ideated and fleshed out modeling methods for predicting optimal intraday delta hedging level for VIX using SPX, its market models, and its implied volatility surface.

CFQTI (China Finance Quant Technical Investment Ltd.) Beijing, CN
Quantitative Analyst Intern Jun 2023 – Aug 2023

- Built, optimized, and selected factor (momentum, beta, sector-wise) models for the Chinese A-shares stock market. Obtained over 10% Sharpe-adjusted year-to-year improvements over baseline indices upon back testing.
- Analyzed effectiveness of, and proposed modifications to, existing trend-following strategies on the Chinese commodities market using continuous futures data of 24 representative products.
- Participated in and contributed to weekly meetings with senior management, presenting findings in PPTs and compiling information to send to current and prospective investors.

LEADERSHIP EXPERIENCE

Columbia Pops New York, NY
Chamber Music Director, Conductor, Pianist Jan 2020 – May 2023

- Conducted for and directed a full orchestra through pieces in six 500+ seat sold-out shows, performing self-arranged music from popular video game soundtracks.
- Organized, led, and played piano for a chamber performance for Columbia's orientation program in Fall 2021 for an audience of 1000+ people.
- Grew chamber program over 6x across three years. Started and developed relationships with other clubs and organizations to expand reach across campus and beyond.

SKILLS & INTERESTS

Languages: English (native), Chinese (native), Japanese (limited working).
Technical Skills: Python (NumPy, Pandas), Scala, LaTeX, SQL, Java.
Interests: Jazz, Poker/TCGs, Basketball, Tea, Music Arranging, Bartending, US History, Russian Literature.