Yihan (Evelyn) Li

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Education

Boston University, Questrom School of Business, Boston, MA

Sep. 2023 - Jan. 2025

M.Sc. Mathematical Finance & Financial Technology, GPA 3.85

• Courses: Statistics, Econometrics, ML, Deep Learning, Stochastic Calculus, Credit Risk, Fixed Income

Tianjin University, Tianjin, China

Sep. 2019 - Jun. 2023

B.Sc. Financial Engineering, Grade: 87/100

Skills and Credentials

Programming: Python, SQL, R, C++, VBA, MATLAB, STATA, LaTeX, Scikit-learn, TensorFlow, Pytorch **Methods:** Fixed Income Models, Derivatives Pricing Models, Econometric Analysis, Statistical Modeling

Work Experience

China Chengxin Indices Co., LTD. (CCX Indices), Beijing, China

Nov. 2022 – Apr. 2023

Quantitative Analyst Intern

- Monitored portfolio performance and alpha signals to identify trends and opportunities.
- Developed an Objective-Oriented architecture to automate and streamline modeling and reporting processes.
- Investigated behavioral finance by analyzing emotional crowd dynamics and their impact on price distortions and conducted a back-test on behavioral portfolio management techniques.

Zheshang Securities Co., Ltd., Beijing, China

Mar. 2022 – Jul. 2022

Financial Analyst Intern

- Analyzed financial data, and property performance using DCF models to estimate venture value.
- Conducted Monte Carlo simulations to evaluate extreme risk scenarios and performed Value-at-Risk (VaR) analysis to quantify potential losses from raw material price volatility at a 95% confidence level.
- Utilized ratio analysis and developed Python-based dashboards to identify key performance drivers.

Projects

ASL Capital Markets Inc., Stamford, CT, United States

June. 2024 – Aug. 2024

Hedging Strategies for Bond ETFs Using Treasury Futures

- Constructed a framework to process and interpret price and interest rate data for trend identification.
- Researched to implement a Bayesian-optimized Random Forest model to predict Treasury yield movements.
- Designed an optimization algorithm for a fully automated hedge ratio estimation of bond ETFs with Treasury Futures and built a backtesting structure.

Boston University, Questrom School of Business MSMFT

CVA and Hedging of Counterparty Risk

Fall 24

- Developed a dynamic CDS hedging strategy using jump-diffusion to model contagion effects and validated it through stress testing with simulated rare default scenarios from historical CDS data.
- Dynamically rebalanced the hedge, reducing the portfolio's average losses from 0.15 to 0.13.

3D Tensor-based Deep Learning Models for Predicting Option Price

Spring 24

- Built a 3D tensor-based deep learning model (CNN+RNN, Conv-LSTM) for option price prediction with fundamental data, price data, and Greeks, achieving 20% lower RMSE than Black-Scholes.
- Optimized model training in PyTorch with batch normalization, dropout, and backtesting on option data.

Robust Bond Portfolio Construction via Convex-Concave Saddle Point Optimization

Spring 24

- Analyzed historical yield and spread data to uncover adverse scenarios and construct robust portfolios.
- Conducted stress testing using Monte Carlo simulations and the Hull-White interest rate model.
- Optimized holdings under varying parameters and backtested value, volatility and maximum drawdown.