

LIN (LUNA) YANG

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EDUCATION

The University of Chicago

Chicago, IL

Master of Science in Financial Mathematics (GPA: 3.9/4.0)

Expected December 2024

- Courses: Portfolio & Risk Management, Python, Option Pricing and Numerical Methods, Stochastic Calculus, Quantitative Trading Strategies, Machine Learning in Finance, Fixed Income, Advanced Computing in C++

The University of Connecticut

Storrs, CT

Bachelor of Arts in Mathematics and Actuarial Science | Minor in Statistics

May 2019

- Courses: Multivariate Calculus, Linear Algebra, Probability, Statistics, Regression Analysis, Actuarial Mathematics

SKILLS

Computing: Python (NumPy, SciPy, Pandas, Scikit-Learn, Statsmodels, TensorFlow), C++, R, VBA, SQL, MS Office

Knowledge: Financial Markets, Statistical Modeling (OLS, PCA, Regression), Machine Learning (Decision Trees, Random Forests, Boosting, KNN, CNN), Algorithm Trading (Back-testing, Factor Models, Carry Trade, Spread Trade), Data Analytics, Time Series, Stochastic Calculus (Itô Formulas, Feynman-Kac Theorem, Girsanov Theorem)

Other: FRM Level II candidate; Passed Society of Actuaries (SOA) Exams: Probability, Financial Mathematics, Models for Financial Economics and SOA coursework in Economics, Corporate Finance, Applied Statistics

WORKING EXPERIENCE

Loomis, Sayles and Company

Chicago, IL

Quantitative Researcher – Project Lab, The University of Chicago

June 2024-Present

- Implemented a Convolutional Neural Network (CNN) to learn and dynamically identify price patterns predictive of future returns through data mining, re-imaging and retraining with multiple indicators, and constructed portfolios with options markets based on predictions and data-driven trading model, attaining Sharpe ratios all in excess of 1.0

Mizuho Securities USA

Chicago, IL

Quantitative Researcher – Project Lab, The University of Chicago

September 2023-December 2023

- Optimized models with Markov Chain Monte Carlo and Rejection Sampling methods to manage and hedge additional risks from counterparty portfolio by simulating and innovating the credit risk rating transition matrix

General Reinsurance AG Shanghai Branch

Shanghai, China

Technical Client Accountant

July 2022-June 2023

- Managed reinsurance accounts, and conducted analytical reports, quantitative predictions of cash flows and stress tests to facilitate experience analysis and business planning (ranked #1 in ROE within the China reinsurance market)
- Organized accounts with MS Excel and SQL to quantify substantial dataset comprising over millions of transactions and customer records, enhancing data quality and query efficiency for further data analysis

Deloitte Enterprise Consulting (Shanghai) Co., Ltd.

Shanghai, China

Consultant, Risk Advisory in Financial Industry

October 2020-June 2022

- Led the team in quantitative risk consulting for banks and insurance companies; constructed risk appetite quantitative models using Python based on Monte Carlo, regression, Markowitz model, and Black-Scholes model, and designed 100+ risk appetite KRIs and advised on indexes limits to better improve company's risk management ability
- Provided Asset and liability management, asset allocation management, portfolio managements, and risk management assessments collaborating with teams, and put forward gap analysis and presented management suggestions for clients

RESEARCH AND PROJECT

Akuna Capital Virtual Quantitative Trading Challenge

August 2024

- Developed and optimized a market-making bot, achieving a high win rate by fine-tuning spread adjustments based on predictive models, performance and profits, while balancing risk and reward across various market conditions

Quantitative Trading Strategies Project

Chicago, IL

Exploration of the Betting-Against-Beta (BAB) Factor Trading Strategy

March 2024

- Led the team simulate and upgrade quantitative BAB trading strategy through constructing models and implementing Stochastic Dominance (SD) Method by further filtering assets, improving portfolio returns by around 50%
- Conducted comprehensive analysis, including performance, factor, back testing, stress test, risk management, and correlations with Fama-French factors, validating the strategy's feasibility and proposed trading ideas of identifying trading opportunities and maximizing returns while managing risks in dynamic markets

The Impact on Efficiency of Asset Allocation in Mixed-Ownership Reform

Beijing, China

Research Assistant in Beijing University of Posts and Telecommunications

June-December 2019

- Supported and communicated with companies, and proposed suggestions for asset allocation under mixed-ownership reformation, providing strategic insights for future business growth and governance of SMEs under reformation