HAROLD (ZHONGFANG) YUAN

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EDUCATION

CARNEGIE MELLON UNIVERSITY, TEPPER SCHOOL OF BUSINESS New York, NY
Master of Science in Computational Finance – MSCF 1/26

- Curriculum: Stochastic Calculus, Machine Learning, Numerical Methods for Option Pricing, Econometrics, Fixed Income
- Programming skills: Python (proficient - pandas, numpy, scikit-learn, Cython), C++ (basic), R, SQL

THE CHINESE UNIVERSITY OF HONG KONG, SHENZHEN (Full Tuition Scholarship) Shenzhen, China
Bachelor of Business Administration in Financial Engineering 7/24

- First Class Honors, coursework: Partial Differential Equations, Numerical Methods, Regression Analysis, Algorithms

THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL Chapel Hill, NC
One-year Exchange Program 5/23

- Coursework includes Time Series Analysis, Machine Learning, Stochastic Modeling, Macroeconomics

EXPERIENCE

DEEPTRADING (Cryptocurrency Prop Shop) Beijing, China
High-Frequency Trading Intern 5/24 – 7/24

- **Tick-level Backtesting System:** Engineered an event-driven system using NautilusTrader framework. Created tools for order matching and P&L analysis and formulated performance metrics for BTC/USTD strategy evaluation and refinement
- **High-Frequency Strategy Research:** Achieved up to 1.3% daily return and 58% win ratio in varied market conditions by formulating and fine-tuning Turtle Trading and market timing strategies with 28 distinct factors across 300 time windows

ADF SOFTWARE (Stock Index Futures Trading Group) Nanjing, China
High-Frequency Trading Research Intern 3/24 – 4/24

- **Algo Trading**: Outperformed the benchmark strategy by 4.2% in win ratios and 1.2% in profit-loss ratio during backtesting, using Strong Trend signals based on volume and price dynamics, and Deep V pattern detection for reversal opportunities

CITIC SECURITIES Beijing, China
Quantitative Research Apprenticeship, Financial Product Group 7/23 – 1/24

- **Alternative Data Alpha Research:** Reached a 280% excess return over the fund manager index over a ten-year period during backtesting by designing an investment strategy targeting the performance of Chinese first-time fund managers
- **ML for Fund Position Prediction:** Achieved approximately 20% reduction in out-of-sample MSE by employing LASSO regressions, and Kalman filtering techniques to predict future fund positions from fund reports
- **ETF Basis Analysis:** Utilized Python to calculate and visualize annualized tracking errors between the underlying Index and ETFs. Found a mean tracking error of 4.8% and attributed it to fees and stock composition differences

KAIYUAN SECURITIES Shanghai, China
Equity Alpha Research Intern, Financial Engineering Group 5/23 – 7/23

- **Alpha Research:** Refined the research on the limit-up overflow factor, increasing the IC to 9.8% and annual returns to 26%
- **Multi-Factors Strategy:** Selected stocks with factors centered around volume-based, sector rotation, and fundamentals. Constructed an index with daily rebalancing and outperformed its benchmark by 20% annually during backtesting
- **Behavioral Analysis:** Compared entry times between institutional and retail investors during AI-themed trends in 2023

PROJECTS

DATA ANALYSIS ON INVESTOR BEHAVIOR USING BLOCKCHAIN TECHNOLOGY 10/22 – 5/23

- **Python Crawler**: Developed web crawler tools with Selenium to extract crypto and user data from blockchain websites

THE PRICE OF LOSING TRUST: AN EMPIRICAL ANALYSIS OF SOCIAL MISCONDUCT BY YOUTUBE 11/21 – 5/22

- **NLP:** Trained a NLTK model for comments sentiment analysis, resulting in 92% binary classification accuracy

ADDITIONAL INFORMATION

- Financial Content Creator and Podcast Host on *BiliBili* (Chinese YouTube, link: space.bilibili.com/629573485), promoting quantitative finance knowledge in China and beyond, gaining over 200,000 views and 5,000 subscribers
- Interests: Swimming, Movies, Basketball, Chinese Go (4 dan), Chinese Calligraphy