Shangze (Kevin) Wu

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Summary

Passionate and detail-oriented master's candidate in quantitative finance with 5-year investment experience and cryptocurrency trading experience, confident in developing trading strategies, analyzing large data sets and performing market research, able to work with highly technical teams in a fast-paced and challenging environment; actively seeking full-time opportunities for 2025

- **Technical Skills:** Python, Java, R, MS Office, Bloomberg, Adobe Premiere Pro, Adobe Photoshop, Adobe After Effects
- **Financial Skills:** Portfolio Management, Risk Management, Machine Learning, Derivative Pricing, Statistical Analysis, Trading, Mathematical Modeling, Financial Statement Analysis, Equity Research, Fixed Income Analysis, Accounting
- **Certifications:** FRM Candidate (Exam 1 in Nov. 2024), SOA Candidate (Exam P in Nov. 2024)

Education

University of Michigan, Ann Arbor Ann Arbor, MI
Master of Science in Quantitative Finance and Risk Management Sep. 2023 – Apr. 2025 (Expected)
Coursework: Machine Learning, International Fin. Mgmt. - Currency Markets, Computational Finance, Analysis for Finance
Cumulative GPA: 3.3/4.0

New York University New York, NY
Bachelor of Arts in Joint Major of Mathematics and Economics May 2023
Cumulative GPA: 3.64/4.0 (Top 20%); Honor: Dean's List (2020)
Coursework: Mathematics of Finance, Numerical Analysis, Statistical Analysis, Linear and Nonlinear Optimization

Internship Experience

PFPA Financial Consulting Company | *Financial Risk Modeling Intern* | Remote Jun. 2024 – Aug. 2024
- Worked with 8 colleagues to conduct quantitative analysis and implementation of credit risk rating models for public companies
- Implemented financial statement analysis, options pricing, and credit risk rating theories, proving the validity of KMV model
- Identified limitations in KMV rating scores, implemented Time-Consistent (TiC) risk rating model based on DD and EDF scores
- Programmed data acquisition, data processing, calculation, and logging modules in Python, applied the TiC model to 50+ companies globally with Python and machine learning, assisted in model validation, and shared results and insights with colleagues

Research Experience

Cryptocurrency Trading Algorithm | *Algorithm Designer and Trader* **|** Ann Arbor, MI Jan. 2022 – Present
Developed an automatic investing system based on price and volatility modeling with Python and R, realized 24/7 automatic decision-making and high-frequency algorithmic trading, earned 50% return from March 2024 till now with less than 15% drawdown
- Modeled Bitcoin option price and volatility with ARIMA and GARCH, and researched trading strategies and their compatibility
- Designed and implemented decision-making and operating frameworks for a hybrid algorithm based on Price-Channel and grid-trading, optimizing decision-making and liquidation parameters with regression and grid-search methods in backtests
- Enhanced statistical analysis, machine learning, and Python programming skills, and designed a showcasing website with Javascript

Kaggle "Home Credit - Credit Risk Model Stability" Competition | *Programmer* **|** Ann Arbor, MI Jan. 2024 – May 2024
Worked with 3 classmates, modeled and predicted the likelihood of clients' credit loan default with Python and deep learning
- Conducted data cleaning with a 27-gigabyte dataset containing 1,526,659 cases, reduced the dimensionality with PCA and IV, and trained Logistic Regression, Random Forest, LightGBM, and CatBoost models with Python
- Ensembled basic learners with Soft-Voting, and developed a Neural Network model taking predictions from basic learners as inputs
- Generated credit-risk based predictions with 0.97 of accuracy and 0.69 of recall, regarding confusion matrices and F-scores

Comparison Analysis and General Guidance of Consensus Algorithms | Thomas Chen | Online Jun. 2022 – Sep. 2022
- Led a team of 3 to analyze the pros and cons and differences of popular consensus algorithms quantitatively and qualitatively
- Analyzed 11 cryptocurrencies in 5 major categories of consensus algorithms, generalized 15 factors from security, performance, decentralization, and energy efficiency perspectives, and generated factorial scores and the overall comparison of algorithms
- Designed detailed depictions of results, composed a 40-page report to support future consensus algorithm developments

Compatibility of Qualitative Models in Real-world Financial Behaviors | New York University Aug. 2021 – Dec. 2021
- Collected and filtered 85 fundamental factors, 15 psychological factors and 19 technical trading factors from Bloomberg
- Identified the relationship between the factors and the aggregate stock prices with R and Excel statistical analysis packages
- Applied regression and hypothesis tests to examine correlations between directional impact factors and stock prices using R
- Composed a 20-page analytical report and presented research results to 30 classmates

Chinese Everbright Bank Cyber Security System Project | Beijing, CN Jun. 2021 – Aug. 2021
- Designed improvement strategies for the bank in cyber security technology, management, and operation with 20 colleagues
- Collected and analyzed national policies regarding cyber security of the banking industry, composed an analytical report
- Participated in 7 interviews, collected interview reports and composed "*the China Everbright Bank Report on the Current Information Security Situation*" and "*the Private Cloud and Public Cloud Security Operation White Paper of the Sports Lottery"*