Gaoyuan (Kevin) WU

(+852) 5607 3851 kevinwu@link.cuhk.edu.hk
Wu Yee Sun College, CUHK, Hong Kong
github.com/Wrigggy linkedin.com/in/gaoyuan-wu-kevin

Personal Summary

- Quantitative finance student focused on systematic trading, factor research, and stochastic modeling.
- Experienced in building leakage-safe research pipelines and production-style trading systems with explicit risk controls.
- Interested in applying mathematical rigor and market intuition to alpha generation and execution.

Education

The Chinese University of Hong Kong (CUHK) Hong Kong, China
BSc in Computer Science Sep 2024 – Present

- Cumulative GPA: **3.85 / 4.0** **Honors:** Soong Ching Ling Zhiyuan Scholarship (320k RMB), Dean's List.
- Core Curriculum: Linear Algebra, Calculus, Statistics, Financial Engineering, Data Structures.

Technical Projects

Event-Driven Systematic Trading Framework (Roostoo Competition) | *Python, asyncio, PyTorch, ONNX* View on GitHub

- Led architecture design and core development of a factor-first, event-driven trading framework with explicit **data → factors → intent → risk → execution** contracts for explainable, debuggable decisions.
- Researched and implemented multi-timeframe signals combining **trend, momentum, breakout, volume, and microstructure** features, including order-book imbalance, funding rate, taker ratio, and open interest.
- Built the async runtime end-to-end: exchange connectivity, order lifecycle management, portfolio tracking, and **Half-Kelly sizing, ATR / trailing stops, exposure caps, and daily drawdown breaker**, backed by **208 automated tests**.

Multi-Factor Equity Research Framework | *Python, CVXPY, Alphalens* View on GitHub

- Built a **leakage-safe multi-factor research framework** for US / HK equities with strict no-lookahead controls and walk-forward validation.
- Implemented **momentum, mean-reversion, and low-volatility** factors with nested parameter search and untouched holdout evaluation.
- Developed cost-aware portfolio backtesting with **benchmark-relative attribution** (alpha, beta, tracking error, information ratio) and bootstrap confidence intervals.

Monte Carlo Simulation in Asian Option Pricing (Research Paper) View on GitHub

- Authored a research paper on arithmetic Asian call option pricing under **Geometric Brownian Motion (GBM)**.
- Implemented **control variates** and **antithetic variates**, achieving a **2.75x efficiency gain**.
- Analyzed how moneyness (S_0/K) affects estimator correlation and pricing precision, and summarized findings in a formal report.

Work Experience

Guosen Securities (Hong Kong) Hong Kong, China
Securities Analyst Intern Jul 2025 – Aug 2025

- **Strategy Backtesting:** Developed multi-factor portfolio strategies using Python, analyzing 30 years of A-share market data to evaluate risk-adjusted returns.
- **Financial Modeling:** Conducted company valuations using DCF / CCA models and synthesized macroeconomic data.

Leadership & Achievements

Microsoft Learn Student Ambassador Feb 2026 – Present

- Selected into Microsoft's global student ambassador program based on technical proficiency and communication skills.

Skills & Competencies

Programming: Python (NumPy, Pandas, PyTorch, CVXPY, asyncio), C, Java, Matlab, Web3.py.
Quantitative: Factor Models, Market Microstructure, Stochastic Modeling, Derivative Pricing, Walk-Forward Validation, Backtesting.
Tools: Git, GitHub, Docker, ONNX, VS Code, LaTeX, CLI.
Languages: Mandarin (Native), **English (TOEFL: 108)**, Cantonese (Intermediate).