Gaoyuan (Kevin) WU

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Personal Summary

Computer Science undergraduate at CUHK (GPA 3.85/4.0) specializing in **Quantitative Finance and Stochastic Modeling**. Proficient in designing backtesting frameworks and implementing advanced variance reduction techniques for derivative pricing. Experienced in developing fully automated trading systems and conducting independent quantitative research. Passionate about applying mathematical rigor to alpha generation.

Academics

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

- Cumulative GPA: **3.85 / 4.0**
- Honors: Dean's List (Faculty of Engineering), Master's List (Wu Yee Sun College)
- Core Curriculum: Linear Algebra, Calculus, Statistics, Financial Engineering, Data Structures

Technical Projects

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

- Authored a research paper analyzing the pricing of arithmetic Asian call options using **Geometric Brownian Motion (GBM)** models.
- Implemented and compared advanced variance reduction techniques, including **Control Variates** and **Antithetic Variates**, to optimize estimator efficiency.
- Conducted numerical analysis demonstrating a **2.75x efficiency gain** using Control Variates, benchmarking performance against standard Monte Carlo methods.
- Evaluated the impact of moneyness (S_0/K) on estimator correlation and precision, synthesizing findings into a formal quantitative report.

Automated Web3 Trading Bot (Competition Entry) | *Python, GenAI* — View on GitHub

- Developed a **fully automated trading system** for a competition, capable of executing end-to-end strategy logic with zero manual intervention.
- Built real-time data pipelines for instantaneous signal generation and trade execution.
- Leveraged Generative AI to accelerate the translation of quantitative trading blogs and papers into production-ready modular code.

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 for investment strategy discussions.

Achievements & Enrichment Activities

Microsoft Learn Student Ambassador (Enrollment) Feb 2026 – Present

- **Selection:** Accepted into the global program based on technical proficiency and a demonstrated passion for technology leadership.
- **Public Speaking:** Showcased exceptional **public speaking and technical storytelling skills** through a competitive video submission, demonstrating the ability to articulate complex concepts to diverse audiences.

Soong Ching Ling Zhiyuan Scholarship Sep 2024

- Awarded 320,000 RMB for top-tier academic performance in the National College Entrance Exam.

Skills & Competencies

Programming: Python (NumPy, Pandas, Matplotlib), C, Java, Matlab, Web3.py.

Quantitative: Stochastic Modeling, Derivative Pricing (MC Simulation), Backtesting Logic.

Tools: Git, GitHub, VS Code, LaTeX, CLI.

Languages: Mandarin (Native), **English (TOEFL: 108)**, Cantonese (Intermediate).