Hengxu Guo(Rolzie)

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Summary

MEng Computing student at Imperial College London (expected First Class) with experience in software development (HSBC) and trading analysis (Shuofund, Optiver). Passionate about quantitative finance, and data-driven strategy design.

Education

Imperial College London — Sep 2023 – Jun 2027(expected First class)

• MEng in Computing(G401)
• Relevant modules: Computing Practical (Haskell, Kotlin, Java and C), Computer Systems, Databases, Graph and Algorithms, Calculus, Linear Algebra, Discrete Maths Logic & Reasoning, Probability & Statistics, Option Pricing.

Experience

Software Development Intern – HSBC — Aug 2025 – Oct 2025

• Developed testing utilities with Java and Spring Boot, including a mock API to simulate request–response workflows and a module to generate secure HTTPS headers by retrieving real-time tokens from the database and injecting them into outbound API calls, enabling efficient debugging and end-to-end system testing.
• Implemented automated unit and integration tests (JUnit, Postman) for Spring Boot services and basic load tests to ensure stable performance under higher request volumes, reducing manual workload by 90% and improving reliability.
• Collaborated with senior developers across teams in India and the UK, participating in daily meetings to address new challenges, deliver new features, and optimize legacy code in a large-scale financial system.

Optiver Trading Academy, Imperial College London — May 2025 – June 2025

• Participated in Optiver's options trading academy; applied market microstructure, arbitrage, and Greeks analysis.
• Designed a delta-neutral portfolio combining cross-exchange arbitrage and volatility trading; awarded Best Trading Strategy among 30+ peers.

Trading Analyst Intern - SHUOFUND INVESTMENT (China) — Aug 2024 – Oct 2024; July 2025 – Aug 2025

• Conducted in-depth analysis of financial markets and asset classes, applying absolute valuation (DCF) and relative valuation (multiple linear regression) to support investment recommendations.
•Collaborated with five senior traders on portfolio optimization and futures trading strategies, leveraging Python for statistical analysis and models such as ROE and CAPM to generate data-driven insights.
•Studied factor selection and built prototype multi-factor models targeting annualized returns of 20–30%(backtested).

Projects

Machine Learning Project — June 2022 - Aug 2022

• Participated in advanced lectures on supervised, unsupervised, and reinforcement learning delivered by Prof. Pietro Liò, University of Cambridge, while studying clustering algorithms, including K-means and decision trees.
• Applied reinforcement learning and Deep Q-learning Networks (DQN) to train an agent to **autonomously play Flappy Bird**, debugging over 10 issues related to game dynamics and achieving stable model performance.

ARMv8 Assembler and Emulator — May 2024 - June 2024

• Developed an assembler and emulator in C for a subset of the ARMv8 instruction set, earning "most interesting project extension" at Open Day with a real-time particle life simulator.

PintOS Operating System Development — Oct 2024 - Jan 2025

• Developed low-level OS features in PintOS, optimizing scheduling algorithms, debugging concurrency issues, and enhancing virtual memory management to improve system performance.

WACC Compiler Project — Feb 2025 - Apr 2025

• Built a WACC compiler in Scala, translating source code to ARM assembly via AST and TAC intermediate stages.
• Extended it with constant folding optimization using symbol propagation to enhance runtime performance.

Human-Centred Design Project – Re@Imperial App — May2025-June2025

• Developed a React-based web app with Supabase backend to tackle campus recycling challenges by encouraging reusable container use, applying human-centred design and agile methods from research to live demo.

Skills and Interests

Languages: Mandarin (Native), English (Fluent).

Tech Skills: C, Java, Haskell, HTML, Kotlin, Python, SQL, React, Spring Boot, Git.

Financial Skills: Excel, Regression Modelling, Valuation (DCF, CAPM), Option Pricing(Black-Scholes, Delta Hedging).

Interests: Swimming, Gliders, Badminton, Financial Markets, Machine Learning, Web Design.