NG SUI YAT, TIMOTHY

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EDUCATION

The University of Hong Kong ***Sep 2024 – Jul 2026***
M.Sc. in Computer Science | Financial Computing

The Chinese University of Hong Kong ***Sep 2020 – Jul 2024***
B.Sc. in Computer Science | Intelligence Science; Minor in Data Analytics and Informatics

PROJECTS

OptiTrade Portfolio and Paper Trading System ***Jan 2026 – Aug 2026***
M.Sc. Capstone | Portfolio Lead, five-member team
- Built Python/FastAPI portfolio APIs and a Next.js holdings interface for position weights, sector allocation, and daily and unrealised P/L.
- Implemented IBKR and Futu portfolio adapters, with persistent SQLite paper portfolios as the default demo path; added semaphore-limited parallel queries and TTL caching for per-holding chart patterns.
- Integrated LLM portfolio insights with strict JSON validation and rule-based fallbacks using portfolio concentration and profit/loss data when model responses were invalid or unavailable; the team's contract tests covered 44 adversarial inputs.
- Developed signal-poller and paper-trade storage paths with position caps, cooldowns, stop-loss and trailing-stop rules; contributed to the SQLite WAL migration and trade-history interface.

Systematic Volatility-Adjusted Momentum Trading Strategy ***Jan 2025 – May 2025***
HKU COMP7415 | Python, NumPy, TA-Lib
- Implemented a long/short strategy on daily VOO bars using 10/50/150-day EMAs, an ADX >30 trend filter, ATR-based position sizing, and trailing-stop orders.
- Sized trades against a USD 200 target risk budget using 1.5 x ATR distance; evaluated performance across 1,258 trading days and 79 trades from January 2020 to December 2024.
- Backtest reported an annualised Sharpe ratio of 0.95 and maximum drawdown of 30.85%, with zero transaction costs and leverage configured at 5x.

Hong Kong-based Drinking Waste Object Detection ***Sep 2023 – Jun 2024***
B.Sc. Final Year Project | YOLO, Kotlin, Android
- Developed a YOLOv8 object-detection model and deployed it to an Android application in Kotlin, tuning memory use and batch size for on-device inference.

WORK EXPERIENCE

Co-Founder & Technical Lead ***Jul 2024 – Jun 2026***
The Infinity Room Limited, Hong Kong
- Built automated inventory tools and POS data pipelines to support demand forecasting and waste management.
- Led technical infrastructure and digital ordering while managing daily operations, P/L, and supply-chain logistics for a university-incubated business.

Software Developer Intern ***Jun 2023 – Aug 2023***
AI Blocks Education, Hong Kong
- Developed cloud backend services using AWS Lambda, RDS, and API Gateway; implemented user-data synchronisation between Auth0 and PostgreSQL.

Blockchain Developer Intern ***Jun 2023 – Aug 2023***
Meta Dot Limited, Hong Kong
- Built a decentralised ticketing frontend in Next.js and TypeScript and implemented Solidity smart contracts for token verification.

SKILLS

- Programming: C++, Python, Java, Go, TypeScript, SQL
- Trading and data: TA-Lib, NumPy, time-series analysis, broker APIs, asynchronous programming
- Backend and tools: FastAPI, Next.js, PostgreSQL, SQLite, AWS, Docker, CI/CD
- Languages: Cantonese (native), English (fluent), Mandarin (fluent)