ALAN MATTHEW

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EDUCATION

Yale–NUS College Aug 2020 – May 2025
Bachelor of Science (Honours) in Math, Computational and Statistical Sciences | GPA: 4.87/5.00
Coursework: Asset Pricing, Statistical Inference, Stochastic Modelling, Machine Learning
Activities: Teaching Assistant for Data Structures & Algorithms, Probability Theory, Statistical Inference
Awards: Kewalram Chanrai Full Scholarship

EXPERIENCE

DRW HFT Proprietary Trading
Incoming Quantitative Trading Analyst Jan 2026

- I will be trading stock options on the Hong Kong Stock Exchange, and researching and implementing high-frequency and mid-frequency trading strategies.

Caladan HFT Market Making
Software Engineer Jul 2025 – Oct 2025

- Developed and maintained ETL pipelines, automating post-trade and transaction cost analysis (TCA) across high-frequency trading algorithms, delivering insights on hedge timing, execution quality, and price markouts.
- Designed and implemented robust NAV-based PnL attribution frameworks, producing granular breakdowns of performance by hedge leg, execution venue, etc., for comprehensive session-level trading reviews.

Caladan HFT Market Making
Software Engineering Intern May 2024 - Aug 2024

- Engineered low-latency trading execution servers and market quote polling services for new exchanges.
- Monitored trading algorithms and adjusted trading execution parameters depending on market conditions.
- Monitored and resolved production issues in core trading algorithms, ensuring correct trading behavior.
- Expanded Python analysis libraries for deeper insights into market volume, PnL, and trading statistics.
- Built ETL visibility tools and debugged out of memory issues in Python, reducing AWS costs by 80%.

Singular Asset Management Asset Management
Equity Trading Intern Sep 2021 - Jan 2022

- Traded Indonesian equities on IDX, supporting a long-only portfolio with PM; generated 11% returns.

Kredens Capital Management Hedge Fund
Equity Trading Intern May 2021 – Aug 2021

- Researched US equities and macro trends to pitch short-term trades; generated 17% portfolio returns.

PROJECTS

- **yokurang/poe2-arbitrage**: Engineered a scalable ETL and ML pipeline to scrape item prices/attributes and estimate FX rates via VWAP. Built both regularized regression and closed-form pricing models, selecting the best per item, and applied residual diagnostics in an iterative feedback loop to refine accuracy. Implemented a live client to continuously scan and detect undervalued items across multiple quote currencies in real time to users.
- **yokurang/strategy-behaviour-analysis**: Investigated trade direction predictability using classification models. Engineered features and systematically trained and applied different models to understand trading behavior.
- **yokurang/mytree**: A published Rust tool for displaying directory trees with custom filters. 2k+ downloads.

SKILLS

Languages: Python, Rust, C++, OCaml, C#, TypeScript, JavaScript, SQL, Kotlin, Scala, Golang, Coq
Frameworks: React, Next.js, Flask, PyTorch, TensorFlow, scikit-learn, AWS (Lambda, DynamoDB)