

# ALAN MATTHEW

9 Jalan Membina, Singapore | +65 8047 3599

alan.matthew.yk@gmail.com | linkedin.com/in/alan-matthew-yk | github.com/yokurang | https://yokurang.com

## EDUCATION

---

### Yale-NUS College

Bachelor of Science (Honours) in Mathematics and Computer Science; GPA: 4.89/5.00

Singapore

May 2025

**Relevant Coursework:** Asset Pricing, Options, Econometrics, Stochastic Modelling, Machine Learning

**Activities:** Teaching Assistant for Data Structures & Algorithms, Probability Theory, and Databases

**Awards:** Kewalram Chanrai Full Scholarship

## EXPERIENCE

---

### Caladan (AlphaLab Capital)

Algorithm Developer Intern

High Frequency Market Making in Singapore

May 2024 - Aug 2024

- Engineered low-latency trading execution servers and market quote polling services for new exchanges.
- 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%.

### Evooq

Software Engineering Intern

Swiss Wealth and Asset Management SaaS

Jan 2024 - Apr 2024

- Created a **Python** LLM chatbot which can query a **MariaDB** database using natural language.
- Created a **Python** tool to generate trading ideas for a given portfolio with specific goals using RAG.

### Hatcher+

Software Engineering Intern

Singaporean Venture Capital SaaS

May 2023 - Aug 2023

- Developed a **Python** LLM service to extract structured data from company capitalization tables.
- Scripted a **PHP** scheduler to apply language updates using LLM-predicted English sentences.
- Authored a smart contract in **Golang** to store investment data on the AWS Hyperledger Fabric network.

### Switchero Labs

Software Engineering Intern

Singaporean Cryptocurrency Exchange

Oct 2022 - Dec 2022

- Automated market and liquidity pool allocation logic in Golang for DeFi trading across 90+ markets.
- Developed a **TypeScript** service for monitoring debt transactions and visualizing trades using **React**.
- Developed a Telegram bot to monitor and alert support of stalled Carbon blockchain trades.

### Kredens Capital Management

Equity Trading Intern

Singapore

May 2022 - Aug 2022

- Researched US equities and macro trends to pitch short-term trades; generated 27% portfolio returns.

## PROJECTS

---

- **Strategy Behaviour Analysis:** Investigated trade direction predictability using classification models. Engineered features and systematically applied different models to understand trading behavior.
- **Market Impact Analysis:** Applied permutation testing to rigorously assess strategy market impact.
- **Strategy Markout Analysis:** Performed post-trade analysis on crypto data by identifying key one-hour windows, computing markouts, and visualizing strategy behaviour, trade profiles, and drawdowns.

## SKILLS

---

**Languages:** C++, Python, C#, TypeScript, JavaScript, SQL, Kotlin, Scala, Golang, Rust, OCaml, Coq

**Frameworks:** React, Vue.js, Next.js, Express.js, Flask, Laravel, AWS (Lambda, DynamoDB)