ALAN MATTHEW

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EDUCATION

Yale-NUS College   Singapore

Bachelor of Science in Math and Computer Science; Minor in Economics; GPA: 4.86/5.00   May 2025

Relevant Coursework: Parallel Programming, Programming Language Design, Machine Learning
Activities: Teaching Assistant for Data Structures & Algorithms, Probability, and Database Systems
Awards: Kewalram Chanrai Full Scholarship

EXPERIENCE

Evooq   Swiss Wealth and Asset Management SaaS

Software Engineering Intern   Jan 2024 - Apr 2024

- Used **Python** to build a 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.
- Developed a **Python** LLM application to automate FAQ responses and streamline proposal tendering.

Hatcher+   Singaporean Venture Capital SaaS

Software Engineering Intern   May 2023 - Aug 2023

- Built a **Python** LLM service to parse excel company capitalization documents into structured JSONs.
- Authored a smart contract in **Golang** to store investment data on the AWS Hyperledger Fabric network.
- Programmed a **PHP** scheduler to predict English sentences using an LLM and apply language updates.
- Designed and developed a comprehensive employee leave system using **Vue.js**, **Laravel**, and **MySQL**.

Switcheo Labs   Singaporean Cryptocurrency Exchange

Software Engineering Intern   Oct 2022 - Dec 2022

- Used **Golang** to automatically link markets and liquidity pools for secure allocation of all capital.
- Created a **Golang** search API to aggregate and consolidate data from multiple databases into one call.
- Developed a **TypeScript** service for monitoring CDP transactions and visualizing trades with **React**.
- Built a **TypeScript** Telegram Bot to alert the team about stalled Carbon blockchain transactions.

Investree   Jakarta P2P Fintech Lending

Software Engineering Intern   May 2022 - Aug 2022

- Implemented new features using **Vue.js** and **Kotlin** to improve the presentation of portfolio finances.
- Crafted a covenant page with **Vue.js** and **Kotlin**, streamlining contracts for 59,000+ business loans.
- Built RESTful APIs in **Kotlin** for querying, processing, and validating data from **Postgres** databases.

OPEN SOURCE

panglesd/diffcessible   Accessible Diff Viewer

- Implemented a Zipper data structure in **OCaml** for faster navigation and viewing of very large diff files.
- Developed a side-by-side diff view feature in **OCaml**, enabling users to switch views with a keystroke.

PROJECTS

- **yokurang/quant-strategy-research**: Researched the performance and patterns of a trading strategy.
- **yokurang/passphrase-generator**: A **Rust** app to generate secure passphrases using Markov chains.

SKILLS

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

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