ALAN MATTHEW

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EDUCATION

Yale-NUS College — Singapore
Bachelor of Science in Math and Computer Science; Minor in Economics; GPA: 4.80/5.00 — May 2025
Awards: Recipient of the Kewalram Chanrai Scholarship
Relevant Coursework: Database Systems, Distributed Computing, Functional Programming
Professional Certification: AWS Cloud Practitioner

EXPERIENCE

Hatcher+ — AI Driven Venture Capital in Singapore
Software Engineering Intern — May 2023 - Aug 2023

- **Data Parsing Microservice**: Engineered a **Python** microservice on **AWS** from scratch to parse excel company capitalization documents into a structured JSON file, reducing manual labor costs by 13%.
- **Employee Leave System**: Independently built an employee leave system using **Vue.js**, **Laravel**, and **MySQL** to handle employee data and manage leave requests, boosting HR efficiency by 20%.
- **Investment Information Smart Contract**: Authored a smart contract using **Golang** that stores investment data for investment management on the blockchain, increasing user growth by 8%.
- **Automated Translation Workflow**: Programmed a **PHP** scheduler to locate untranslated strings in the codebase, predict English sentences using OpenAI, and apply language updates, saving 10h/week.
- **Slack Bot for System Monitoring**: Developed a **Python** Slack Bot to monitor web scraping bot health, analyze scraped data, and report to engineering Slack channel, reducing support costs by 8%.

Switcheo Labs — Cryptocurrency Exchange in Singapore
Software Engineering Intern — Nov 2022 - Dec 2022

- **Consolidated Search API**: Architected a **Golang** API to aggregate data from multiple databases into a unified API call; optimized retrieval for 96,000+ users, cutting query time by 40%.
- **Market-Pool Linkage**: Leveraged **Golang** to auto-link markets and liquidity pools, eliminating manual work and and securely allocating all USD $130+ million of capital across the exchange.
- **Transaction Service & UI**: Implemented a **TypeScript** service with **Redis** to handle Switcheo's DEX debt transactions and visualize trading activities with **React**, serving 35,000 daily visitors.
- **Telegram Bot for Blockchain Monitoring**: Built a **TypeScript** Telegram Bot with **Redis** to alert the team about stalled Carbon blockchain transactions, increasing resolution speed by 83%.

Investree — P2P Fintech Lending in Jakarta
Software Engineering Intern — May 2022 - Aug 2022

- **Investment Dashboard Enhancement**: Implemented new features with **Vue.js** and **Kotlin**, improving presentation of financial statements and key metrics, boosting user reviews by 17%.
- **Covenant Page Development**: Designed and developed a covenant page from scratch using **Vue.js** and **Kotlin**, simplifying the contractual agreement process for over 59,000 small business loans.
- **RESTful APIs Development**: Constructed and deployed RESTful APIs using **Kotlin** to query, process, and validate data from **PostgreSQL** databases for the frontend for over 100,000 users.

SKILLS

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

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