

# ALAN MATTHEW

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## EDUCATION

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### Yale-NUS College

Bachelor of Science in Math and Computer Science; Minor in Economics; GPA: 4.80/5.00

Singapore

May 2025

**Awards:** Recipient of the Kewalram Chanrai Scholarship

**Relevant Coursework:** Databases, Distributed Computing, Functional Programming and Proving

**Professional Certification:** AWS Cloud Practitioner

## EXPERIENCE

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### Hatcher+

Software Engineering Intern

AI Driven Venture Capital in Singapore

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%.

### Switchco Labs

Software Engineering Intern

Cryptocurrency Exchange in Singapore

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 securely allocating all USD \$130+ million of capital across the exchange.
- **Transaction Service & UI:** Implemented a **TypeScript** service with **Redis** to handle Switchco'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

Software Engineering Intern

P2P Fintech Lending in Jakarta

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

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

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