

Eugene Toh

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EDUCATION

Singapore Management University
Bachelor of Science (Information Systems)

Aug 2021 – May 2025
High Merit (expected)

EXPERIENCE

Mobile Developer Intern

Apr 2024 – Aug 2024

Vibefam

- Collaborated with mobile developers to maintain and enhance a fitness marketplace app throughout its development lifecycle, delivering thoroughly tested Flutter code ahead of schedule with minimal bugs in production.
- Demonstrated rapid adaptability by transitioning to mobile development role with no prior experience, quickly mastering Flutter and contributing to app launch reaching 10,000 users.
- Optimized app performance by reducing launch time from 8 to 3 seconds and implemented health tracking integration with Google Fit and Apple Health.
- Developed custom Flutter charting library for health monitoring to meet precise UI requirements and integrated designs from Figma specifications.
- Improved app architecture for scalability while maintaining the platform through regular updates and performance monitoring.

Backend Engineer Intern

Dec 2024 – Jan 2025

Vibefam

- Transitioned from initial mobile development role to lead cold start time optimization initiatives by migrating hosting infrastructure from serverless functions to containerized Google Cloud Run, achieving 40% cost reduction and slashing deployment times from 90 to 3 minutes.
- Completed 6-week technology evaluation and migration project ahead of schedule, demonstrating technical aptitude and earning leadership trust through autonomous execution.
- Implemented comprehensive Infrastructure as Code (IaC) solutions and established robust CI/CD pipelines for the backend repository, ensuring system reliability and maintainability.
- Managed complex infrastructure transitions across multiple repositories, while maintaining backward compatibility and system stability.
- Developed API-compatible wrappers for web applications to interface with new backend architecture, ensuring seamless operation during the migration period.
- Strengthened system security and observability by implementing advanced logging, debugger setup, and deploying Google Cloud Armor firewall solutions.
- Pioneered company-wide adoption of Infrastructure as Code practices.

CERTIFICATIONS

- AWS Certified Solutions Architect – Associate
- Oracle Java Certified Foundations Associate

Nov 2024 – Nov 2027
Nov 2023 –

SKILLS & INTERESTS

Technical skills

- Languages: Python, Java, Kotlin, JavaScript/TypeScript, HTML, CSS, Dart, Rust, R, C++
- Frontend: React.js, Next.js, Tailwind CSS, Svelte, SvelteKit
- Backend: Spring Boot, Node.js, Flask, FastAPI, GraphQL
- Mobile: Flutter, Jetpack Compose
- Cloud/DevOps: AWS (Solutions Architect), GCP, Docker, Terraform, Pulumi, Linux
- Data: R (tidyverse), Pandas, numpy, Excel (VBA), Basic Geospatial Analysis
- AI: YOLOv5 for medical image classification (chest x-rays), LLM fine-tuning using Mistral-7b-instruct with LoRA
- Databases: MySQL, PostgreSQL, MongoDB
- Other: Unity Engine, Raspberry Pi

Languages

- English (Fluent), Mandarin (Professional)

Interests

- Digital Music Composition

PROJECTS

- [Web-based Wordle Solver in React, Tailwind, and WebAssembly](#) and its [mobile counterpart](#).
- [Author of Symphonia.js, a Node.js audio playback library](#) that gained 91 GitHub stars within three months of launch, demonstrating strong community adoption.
- [Developed a distributed system using microservices in three languages, featuring OpenAPI integration, REST/GraphQL APIs, and a HTTP gateway—all dockerized for containerized deployment.](#)
- [Using geospatial analysis to analyse spatial and temporal patterns of armed conflict in Myanmar from 2021-2024 using ACLED data to better understand the distribution of different types of violence and strategic developments across the country.](#)
- Independently architected and deployed a [full-stack serverless application](#) using AWS Lambda, API Gateway, and DynamoDB for a school project, leveraging Infrastructure as Code (IaC) principles to achieve scalable cloud infrastructure management and automated deployments.
- [Burrata](#), a full-stack programmable alarm system built with React and Rust backend, featuring custom wake-up routines for personal daily use.
- Lead a team of 6 to deliver [MyMovieList](#), a movie recommendation tool with Firebase, completing the project two weeks ahead of schedule while maintaining high code quality standards.
- Deployed Prometheus and Grafana, written a Prometheus exporter and programmed a Raspberry Pi Pico W as a buzzer alarm for a custom written [home IoT solution](#) for an embedded programming school project.
- [Tab Grabber](#), a Minecraft mod developed through reverse engineering of Mojang's codebase to implement custom player list functionality.
- Visit <https://www.eugenetoh.net> and my [GitHub](#) for more projects.