

Gabriel Ong Zhe Mian

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Full-Stack Developer specialising in Legal Technology

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EDUCATION

Singapore Management University

BSc Computing and Law, Cybersecurity (2nd Major)

Aug. 2023 - May 2027

GPA: 3.60/4.00

Anglo-Chinese School (Independent)

International Baccalaureate Diploma Programme

Jan. 2019 - Nov. 2020

Points: 44/45

SKILLS

Frontend: React, Next.js, React Native, Flutter, Electron.js

Backend: Python, TypeScript, Go, Rust, SQL, Java, Node.js

Cloud & Infrastructure: GCP, AWS, Docker, Kubernetes, GitHub Actions, Supabase, MongoDB, Pinecone, Cloudflare

Legal: Intellectual Property Law, Privacy & Data Protection Law, Company Law, Contract Law

EXPERIENCE

WhyHow.AI, San Francisco: *Software Development Intern*

Aug. 2025 - Dec. 2025

- Architected a multi-agent ETL pipeline using **Python** and **Pydantic AI** to detect emergent harms across 10,000+ PubMed abstracts, reducing manual review time by an estimated **60%**.

Custom Automated Systems, Singapore: *Full-Stack Development Intern*

May 2025 - Aug. 2025

- Implemented RAG and Agentic Refinement in **TypeScript** with **Hugging Face** models on ProQuaere's Outputs.
- Optimised client-side LLM inference for ProQuaere across browser, desktop, and mobile platforms using **WebGPU** and **Electron.js**, achieving a **40%** reduction in average response latency.
- Upgraded Caselist's **PHP** Backend for Legal Case Retrieval from CommonLII, Lawphil, SAL LawNet Databases.

SMU Yong Pung How School of Law, Singapore: *Research Assistant*

Jan. 2025 - Aug. 2025

- Built a collection of Adversarial AI agents with **Pydantic AI** and **ChromaDB** for use in legal scholarship and argumentation.
- Developed and deployed a **JavaScript** web application enabling researchers to benchmark adversarial AI agents across standardized legal analysis tasks, supporting ongoing academic publication research.

Elefant, Singapore: *Backend Development Intern*

Sep. 2024 - Dec. 2024

- Engineered **CI/CD** pipelines in **Python** that automated end-to-end data extraction, enrichment, and validation workflows, reducing manual data processing effort by **65%** and improving data reliability.
- Deployed web monitoring solutions in **GCP** to log continuous data availability.

SMU Legal Innovation and Technology (LIT), Singapore: *Tech Development Director*

Aug. 2023 - Aug. 2024

- Led development of 3 open-source legal tech tools in **Python**, **JavaScript**, and **Rust** as Tech Development Director, growing the club's GitHub presence and onboarding **10+** student contributors.

PROJECTS

Yuho: Domain-specific language (DSL) in **Rust** that provides a formal, programmatic representation of Singapore's Penal Code, enabling automated legal reasoning and statute querying across **50+** criminal offences.

Sea Kayak: Full-stack **React** and **Node.js** web application that aggregates and curates real-time legal news from **10+** Singapore sources.

Jikai: Tort law hypothetical generation system using **RAG** and multi-agent pipelines in **Python**, **ChromaDB** and **LangChain**, enabling law students and researchers to generate and stress-test novel legal scenarios for academic study.

AWARDS & COMPETITIONS

SMU Global Impact Scholarship Award

Premier flagship scholars' award

Aug. 2023 - May 2027

SMU LIT Hackathon 2025 1st Place (MinLaw Track 2)	Sep. 2025
NUS Product Club Vibe-Building Hackathon 2025 2nd Place	Aug. 2025
HackOMania 2025 GeeksHacking Choice Award	Feb. 2025
YouthTechSG YouthxHack 2024 1st Place (Digital Defence Track)	Aug. 2024