

VINCENT ONG

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EDUCATION

National University of Singapore, Singapore

Aug 2025 — Present

- Bachelor of Computing in Computer Science, GPA: 4.31/5.00

SKILLS

Programming Languages: Python, Go, Java, TypeScript, JavaScript, C, SQL

Frameworks: React, Gin, Next.js, LangGraph, PyTorch, FastAPI, Express.js

Technologies: PostgreSQL, Docker, Git, Redis, oMLX, GCP, AWS

EXPERIENCE

AI Engineer Intern

May 2026 — July 2026

AI Singapore

Singapore

- Engineered an **agentic multimodal** document parser for CSIT orchestrating **18** open-source OCR and VLMs (GLM-4.6V, Qwen3-VL) through layout-aware, region-level tool dispatching, yielding **95% extraction fidelity**.
- Designed a self-improving **evaluation harness** pairing cross-family **VLM-as-a-Judge** scoring with deterministic guardrails, stateful agent **memory** and robust regression test coverage, cutting CER and WER by **~25%**.
- Deployed on-prem, serving quantized VLMs on Apple Silicon via **MLX/oMLX** instrumented with **OpenTelemetry** and **Arize Phoenix** tracing. Rigorously **A/B tested** agentic variations against deterministic baselines.

Software Engineering Intern

Mar 2025 — Jun 2025

Sonzai Labs

Singapore

- Built a high-concurrency clan system for the startup's flagship game, Telemafia, serving **22 REST APIs** in **Go**, with two-tier **Redis** caching and atomic **ScyllaDB CQL** counters, eliminating write-lock contention.
- Engineered responsive, **high-performance** gameplay **UI/UX** for global users with **React, TypeScript, Next.js**, i18n for internationalization and rapid bug resolution on a **CI/CD** workflow with **Vitest** and **Playwright E2E** tests.
- Led frontend development for the secure launch and minting of **500 NFTs** by integrating smart contracts with Web3/TON wallet authentication and configuring **Cloudflare WAF** to mitigate DDoS and XSS attacks.
- Developed a real-time backend leaderboard system with **Python** pipelines on **Windmill** orchestrator streaming **Apache Pulsar pub/sub** events into **ScyllaDB** for **automated data reconciliation**.

SAF Infantry 3rd Sergeant

Mar 2023 — Jan 2025

Singapore Armed Forces

Singapore

- Demonstrated reliability and trustworthiness in high-stakes environments, overseeing firearms **accountability** and taking **ownership** of the safety and operational readiness of recruits while **leading** as a section commander.

PROJECTS

ThreadTalk | Go, Gin, Next.js, TypeScript, React, AWS, Docker, PostgreSQL

Dec 2025

- Architected a scalable, Reddit-inspired forum application by integrating stateless **Go (Gin)** RESTful APIs with a Next.js, TypeScript and React frontend, backed by a **PostgreSQL** relational database.
- Optimized nested comment thread retrieval by replacing recursive N+1 queries with a single indexed query and O(n) **in-memory** tree construction, using goroutines to **parallelize** independent post and comment reads.
- Automated secure production deployments by containerizing the serverless backend with **Docker** for **AWS Lambda**, establishing a **CI/CD** pipeline via **GitHub Actions** and **OIDC** for keyless **Amazon ECR** integration.
- Hardened the platform with **VPC** subnet isolation for **RDS**, least-privilege **IAM**, and JWT authentication with signature verification middleware, and automated idempotent, versioned schema migrations in **Go** on deploy.

Bastion, Sup x OpenAI Hackathon | Cloudflare Workers, D1, KV, Workers AI, React

June 2026

- Shipped an edge-native **threat detection** layer that **intercepts and denies** malicious tools, skills and URLs before AI agents execute them, fail closed, anchoring every verdict in an independently verifiable **SHA-256 hash chain**.

Baitrage, AI Engineer Hackathon | Vercel AI SDK, Zod, Web Speech API, Chokidar

May 2026

- Built a **multimodal** frustration detector scoring voice, facial affect and screen context with **Gemini** Flash, triggering a **RAG agent swarm** over a live SSE symbol map to synthesize codebase-aware prompts that break error loops.

NUS Fintech Summit Hackathon | XRP Ledger SDK, Python, FastAPI

Jan 2026

- Architected **blockchain rails** on **XRP Ledger**. Eliminated **100%** pre-funding requirements by deploying **XRPL escrows** and agent-driven credit underwriting, replacing collateral locks with conditional settlement.

Visente | Entrepreneurship

Nov 2022 — Mar 2023

- Generated approximately **\$100 profit** by launching a niche fragrance decanting venture, **selling 40+ bottles** by leveraging consumer demand for **affordable access to diverse scents**.
- Identified high-margin opportunities by executing strategic market research on **competitor pricing** and **consumer trends**, using fragrance **profiling** to optimize **cost efficiency** and production selection.

CERTIFICATIONS

Google Cloud Professional Machine Learning Engineer Certification

Jun 2025

Google • Expires: Jun 2027