

VIET ANH NGUYEN

📍 Ho Chi Minh City, Vietnam 📞 +84 329 922 595 ✉️ vietanhhd03@gmail.com  [LinkedIn](#)  [GitHub](#)

EDUCATION

Bachelor's, Advanced Program in Information Technology, Vietnam National University 2021 - 2025
GPA: 3.51/4.0

EXPERIENCE

Proxel — Web Data Automation Platform

Software Engineer

Oct 2024 - Jun 2026

- **Refactored** a single-threaded Node.js workflow engine into a **multi-threaded worker pool**, reducing infrastructure from **50 nodes to 10** while sustaining **50 concurrent workflows** across **5M+ pages/day**
- Designed an **automatic failover** mechanism using heartbeat monitoring that resumes saved workflow state on the least-loaded healthy node, eliminating full restarts on node failure
- Identified and fixed two **memory leaks** in the workflow engine causing pod memory to climb under sustained load, building a custom idle-detection mechanism for **p-queue**'s different **idle** event behavior ([issue #237](#))
- **Technologies:** TypeScript, Node.js, Redis, Kafka, ClickHouse, Elasticsearch, Docker, GitLab CI/CD, Prometheus, Grafana

Cohost AI — AI-Powered Hospitality Technology Platform

Software Engineer / Software Engineer Intern

Feb 2023 - Sep 2024

- Migrated production services from AWS to a self-hosted three-node cluster on **CapRover**, achieving **zero-downtime** cutover and reducing monthly infrastructure cost from **\$2K to \$600**
- Redesigned **API routing** across the entire platform's frontend and backend to pass team ID as a request parameter instead of subdomain, supporting the migration from AWS to CapRover for every team
- Owned end-to-end design and delivery of a **session-based calendar-sharing** flow, building a new session-based authentication API and updating the public listing and timeline-sharing endpoints to **v3**
- **Technologies:** Python, Django, Flask, Celery, Kafka, MySQL, Elasticsearch, AWS, CapRover, Docker, NGINX, Linux

PROJECTS

MemKV

Go, RESP2, TCP

- Developed an **in-memory key-value database** in Go with strings, lists, hashes, sorted sets, **TTLs**, and **snapshots**
- Ensured **thread-safety** by running every command through a **single goroutine** off a queue, avoiding locks entirely
- Made writes **crash-safe** with a **write-ahead log**, checksumming and flushing each write to disk before applying it in memory

Media Notes

Go, Python, gRPC, GraphQL, PostgreSQL

- Built a service turning hour-long audio and video into cited transcripts and summaries as **background jobs**
- Made processing reliable with **idempotency keys**, so a crashed worker resumes from its last completed step
- Prevented lost jobs and double charges with a **transactional outbox** over **Kafka**, refunding reserved credit on failure

HONORS & AWARDS

- **High Honors**, ICPC Vietnam National Programming Contest (2024)
- **Second Prize**, ICPC Vietnam Northern Provincial Programming Contest (2024)
- **3rd Prize**, Vietnam National Olympiad in Informatics (2021)