

Khôi Nguyen Vu

Bachelor of Information Technology — Cyber Security & Artificial Intelligence

I am a third-year IT student at Macquarie University, pursuing a double major in Cybersecurity and Artificial Intelligence (with a WAM of 88.56). I have experience developing full-stack web applications from scratch, particularly in automating repetitive tasks, generating and storing documentation based on system data, and designing open systems that support the integration of custom tools. My practical AI experience includes training models from scratch, fine-tuning pre-trained models, and integrating Large Language Model (LLM) APIs into web applications. I am seeking an internship opportunity that allows me to apply and further develop these skills in building AI-driven automation systems.

✉ khoinguyenvu.forwork@gmail.com 🌐 Sandalph0n 📞 +61 425 425 534
📄 Work Rights: Student Visa (Subclass 500) with limited working hours

TECH EXPERIENCE

SYSTEM ARCHITECT — LERNUMI (TEAM PROJECT)

- Architected an academic-integrity learning platform, presented at the **Sustainability Showcase 2026** (UN SDG 4 & 8), where it won the **People's Choice Award**.
- Designed an **event-sourcing model** — an append-only log of structured edit operations — that lets a student's work be **replayed step-by-step**, distinguishing work built up gradually from content pasted in at once, instead of relying on periodic snapshots.
- Designed a **tool-platform contract** so independently built browser tools plug into the platform through a published HTTP API with versioned, immutable packages — the platform owns identity, storage and permissions; each tool owns its own editor and data.
- Designed the **database schema** and a **role-based access-control model** with reusable roles and resource-scoped permissions (institution-level vs scoped-to); selected the stack: **Next.js / Vercel, AWS (RDS PostgreSQL + S3), Prisma**.

FULL-STACK DEVELOPER — INTERNAL BUSINESS MANAGEMENT SYSTEM (PRIVATE TOOL)

- Designed and built (solo) a full-stack app (**Next.js, Supabase**) that replaced a manual workflow of scattered Excel files and hand-typed documents, moving all records and files to the cloud for shared team access.
- Modelled company, customer, goods and shipping records as related tables with full CRUD; creating a shipping record reuses saved company and customer details rather than re-entering them.
- Automated generation of **Contracts, Invoices and Packing Lists** as PDFs — assembling saved details and line items, **auto-calculating totals to remove manual arithmetic errors**, and storing output in cloud file storage; in daily use by the team.

AI INTEGRATION — RECRUITMENT CV-MATCHING APP (VIBE-CODING HACKATHON)

- Prototyped a two-sided recruitment web app — recruiters post job descriptions, candidates upload CVs and apply — at a vibe-coding hackathon using an AI app-builder (Lovable).
- Designed the LLM integration: set up the **Google Gemini API** and prompted it to score each CV against a job description, returning a structured **JSON** contract — match score (1–100), strengths, weaknesses and comments; validated the request flow (JD + CV + prompt) via **curl**.

FULL-STACK DEVELOPER — MACQUARIE ASSESSMENT PLANNER

- Designed and built a public web app (**Next.js, Vercel**) for tracking assessments and deadlines — wrote all API routes and parsing logic; **live, with ~100 active devices per month**.

OTHER PROJECTS

Macquarie Handbook Data Pipeline
Python, Selenium

Winding Back in Times (Game Jam)
Phaser 3, web game

TECH AWARDS

Second Prize — Hanoi Informatics Olympiad
Competitive programming contest (Vietnam).

People's Choice Award — Lernumi
Sustainability Showcase 2026, Macquarie University.

FSE Sustainability Showcase Winner
CarbonCue (team project).

People's Choice Award — Game Jam
Winding Back in Times.

Subject Highest Achiever
COMP1010 & COMP2100.

High School Robotics Competition Awards
Robot design and programming challenges.

TECH STACK

Languages: JavaScript/TypeScript, Python, Java, C/C++, x86 Assembly
AI / ML: PyTorch, Hugging Face Transformers, scikit-learn — CNNs from scratch, transfer learning & fine-tuning (MobileNet), fine-tuned BERT for sentence-pair similarity; RAG & Transformer fundamentals
Frameworks: Next.js, React, Node.js, Electron
Cloud / Data: AWS (RDS, S3), Vercel, Supabase, PostgreSQL, MongoDB, Prisma
Tools: Git, GitHub, Linux CLI, Docker, Postman, Selenium, Gemini API

EDUCATION

Bachelor of Information Technology

🏛 Macquarie University 📅 2024 – 2027 (expected)

- Double major: Cyber Security & Artificial Intelligence
- Current WAM: 88.56

Languages: Vietnamese (Mother tongue) • English (Professional working proficiency)

High School

🏛 Tran Phu – Hoan Kiem 📅 2021 – 2024 📍 Ha Noi

- GPA: 9.6/10 — active in robotics & programming competitions