

Dang Khoa Le (Liam)

Swinburne, Melbourne • ✉ binkhoa1812@gmail.com • ☎ 0450-445-373 • 🔗 <https://github.com/Lelekhoea1812> • 🔗 <https://huggingface.co/Binkhoale1812> • 🔗 <https://www.linkedin.com/in/dang-khoa-le-96a6332a8>

EDUCATION

SWINBURNE UNIVERSITY OF TECHNOLOGY

Swinburne, Melbourne

Bachelor of Software Engineer (with Honours)

2022-now

Relevant Coursework: Software Development, ML/DL, Web Full-stack Development, Mobile Application Development, Data Structures, Computer Vision, Data and Financial Analysis, Cybersecurity Deployment, Object Oriented Programming, Software Architecture, Cloud Architecture, Hardware Embedding.

SKILLS

Programming Languages: Python, Java, Kotlin, SQL, C++, C#, JavaScript, TypeScript.

Communication Languages: English, Vietnamese, Mandarin

Frameworks: FastAPI, Flask, Node.js, SpringBoot, Vue, React, Angular, Next.js.

AI/ML: TensorFlow, PyTorch, YOLO, ResNet, CNN, LLM, VLM, NLP, RAG architectures, Knowledge Distillation, CV, ASR, Machine Learning, Deep Learning, Synthesis, Data Analytics.

Tools: Docker, Kubernetes, MongoDB, MySQL, AWS, Azure, Google Cloud Console, Oracle, Jenkins, Jira, Git, Firebase.

EXPERIENCES

SuperEdTech

Melbourne, Victoria, Australia

Cofounder - CTO

June 2025 - Now

Our team of 4 believing in domain-specific, reliable and affordable education, we support university students and graduates in both their studies and career, leveraged by AI and technology capability.

- **AI Tutor:** Developed a dynamic, curriculum-aligned tutoring web app that creates personalized learning roadmaps and automates assignment/grading using a multi-agent RAG and MCP architecture.
- **StudyBuddy:** End-to-end hierarchal TreeRAG application with LLM and OCR technologies allows students to chat with their uploaded documents (PDF/DOCX) for precise, source-based learning.
- **IELTS Enhancer:** AI writing coach that provides personalized feedback, correctness, and guidelines to help users achieve their target IELTS band. Developed with CoT multi NLP and LLM architecture.
- **CVA:** Engineered career coaching with AI, semantic provisional that crafts job-specific resumes and cover letters to maximize applicant success.

CPG Seedcom

Ho Chi Minh City, Vietnam

Data Science | Team Leader

June 2025 – September 2025

Leading a team of 6 to build a Vietnamese-language AI assistant, converts business questions into SQL queries across MySQL and Oracle, fusing multi-modal self-QA for Reinforcement Learning over failures and successes. Built with FastAPI, Gemini & Qwen3, MongoDB vectorbase, leveraging Chain-of-Thought and Agentic RAG for autonomous analytics in sales, supply chain, and marketing. The system **reduces manual workforces by up to 80%**, delivers instant, explainable insights, a unique plugin solution enables direct database-to-decision workflows without human intervention.

Pytherra

Ho Chi Minh City, Vietnam

AI Engineer | Part-time

June 2025 – Now

Contributed to Clara, Vietnam nationally recognized medical LLM+VLM assistant trained on 400k+ doctor-annotated cases, including 210k+ X-rays, and synthesis. Led development of an agentic RAG module using EMR to improve diagnosis accuracy and medication safety. Also supported model training, benchmarking, and built intelligent chat memory retrieval for contextual continuity.

PopTech

Ho Chi Minh City, Vietnam

ML/DL Engineer | Team Leader

May 2025 – Now

Led a 4-member team to architect and build a scalable electricity forecasting and control application from IoT device. Integrated ML/DL (TFT, XGBoost), Reinforcement Learning (DQN), and LLM-driven advisory to predict billing, optimize device usage, and automate energy-saving decisions. Enabled multimodal interaction via ASR, text, and voice synthesis for a fully interactive MCP experience.

Nam Á Bank

Ho Chi Minh City, Vietnam

Software Engineering - Data Science | Intern

December 2024 – March 2025

Participate in fintech digitalization projects with full-stack development (Vert.x Backend, Java Android) and AI integration (CV, OCR, LLM, Chatbot). Proposed strategic enhancements:

- **Explore the high potential of remittance services** targeting 5M+ overseas Vietnamese. Taking role in participation at Australian market, research for deployment.
- **Redesign mobile app** concept for a faster access, shifting complex tasks to web-services, deliver a user-friendly UI for accessibility-focused users.
- **Implement passport OCR** to enable foreign customer onboarding with banking programs, overcome traditional limitation for identification with domestic ID. Implement synthetic data generation.

The Auburn Coffee

Hawthorn East, Victoria, Australia

Website Developer | Part-time

April 2024 – Now

Developed the official website for a local commuter café at Auburn Station. Features include interactive menu, real-time pre-ordering, loyalty program with personalize QR code, and staff dashboard for order management, rating and feedback, sale analysis. Built with VueJS, Node.js (Vercel), database storage on MongoDB, and Firebase. Revolutionizing the business with digitalisation procedure, **skyrocketing sale on an instance by 30%**.

iNet Solution

Ho Chi Minh City, Vietnam

Software Engineering - Data Science - Cloud Solution | Intern

December 2024 – March 2025

Analysing data, document, article for Sentiment Analysis and Business Overview with LLM models, integration with cloud computing architecture. Leading current team to leverage Obsei framework and Transformers for sentiment analysis, fact-checking, summarization, **deliver actionable business insights** for the clients.

VietDan JSC

Ho Chi Minh City, Vietnam

Software Engineering | Part-time

December 2024 – February 2025

Develop Water Meter OCR, a real-time water meter scanning solution using Next.js, Node.js, and Flask API, for government client. Self-mining and annotation of data, employs YOLOv5xu for detection and CV+OCR for text, hosting on Jetson Nano and AWS EC2. Production met the planned KPI to **reduce manual labour by approximately 35%**.

ALTA MEDIA

HCM City, Vietnam

Software Engineering | Intern

December 2022 – February 2023

Dev-Ops Engineer, deploying software architecture with Docker. Implement backend infrastructure for core software systems.

LEADERSHIPS

MedAI Research Team

Led research team of 5, funded by Swinburne to build a multi-agent system with domain-specialist agents (diagnostics, pharmacology, triage) coordinated by a reasoning agentic orchestrator MCP:

- Boosted diagnostic **accuracy & safety** by fine-tuning LLMs on **500k+** curated & synthetic cases, using **Knowledge Distillation**, **LoRA/QLoRA** (GRPO reasoning), and **augmentation** (QAC paraphrasing/chunking, self-consistency, counterfactuals, backtranslation).
- Built **Agentic RAG** (Node & Graph RAG) over EMR/EHR + PubMed with retrieval safety rails, real-time update, and citations to mitigate hallucination.
- Established strict evaluation: **MedMCQA / PubMedQA** benchmarking, **semantic similarity** audits with biomedical embeddings, early-stopping LR scheduling; trained reproducibly on HPC.

Triage Response: LLM-Driven Solution and Drone Medication Delivery

Developed and deployed an AI-powered emergency triage system integrating React Native (mobile), React (web portal), FastAPI (backend), Whisper-v3, Gemini 2.5, Qwen-VL, FAISS, and MongoDB with MIMIC-IV triage-response data to enable real-time voice-triggered alerts, clinical decision support, and secured-fast drone (Great Shark 330 PRO VTOL) medication delivery.

SkyLedge - Capstone Project

Hawthorn, Victoria, Australia

Team Leader – AI and Backend Development

December 2024 – March 2025

Led a team of 4 to build an OBD-II-based predictive maintenance system for SkyLedge, targeting reduced fleet servicing costs. Implemented real-time data logging with Raspberry Pi, automated cloud data engineering (FastAPI, Docker), used KMean/GMM PCA clustering for driver behaviour and cost-efficiency analysis. Prototyped fault prediction with XGBoost, LSTM, live monitoring dashboard.

PROJECTS

Golf Scorecard Scanner

A byproduct of VHandicap, with YOLOv8/YOLOv11 classification, VietOCR, PaddleOCR, MNIST CTC loss model for handwritten recognition. Integrates Qwen2.5-VL VLM agent for advanced reasoning.

Student Management

Bilingual school platform for operational management, includes enrolment, classes, tests, and administration. Built with Next.js, TypeScript, AWS in structural scaling and cyber-safety measurements.