Dang Khoa Le (Liam)

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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, Jenkin, Jira, Git, Firebase.

EXPERIENCES

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.

Pythera 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%**.
Hardware Technician | Part-time September 2019 – December 2019
Hardware/Mechatronic technician specializing in motherboard replacement, repair and maintenance services. Have an in-hand experience with routers motherboard.

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

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.

Sall-e: Autonomous Robot for Oceanic Garbage Collection
Led team of 5 engineers on software development and AI integration for Autonomous Robot combining computer vision, robotic techs, and navigation system. Directed cross-disciplinary R&D to deliver a scalable, AI-driven solution for ocean waste detection and collection. Data mining and self-train CNN and Transformer model, real-time access.

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), and used K-Means clustering for driver behaviour analysis. Prototyped fault prediction with XGBoost, Random Forest, and LSTM, live monitoring dashboard.

PROJECTS

AI Tutoring
Sole founder-developer of an AI tutoring web app in active development. The platform combines LLMs (Gemini & Qwen in multi-RAG agentic architecture), custom KB embeddings from PDF and online sources crawler agent, deliver personalized, curriculum-aligned instruction. Features include level-based and virtual tutoring, automated grading, dynamic timetable roadmap with topic devision and covered materials, support website, video, and quizzes crawling from online sources. Built with React.js (Next.js, Tailwind, shadcn/ui), FastAPI, MongoDB (GridFS), in microservices architecture.

Medical Chatbot
Developed an optimized AI medical chatbot with Gemini Pro 2.5, FAISS (with GridFS), NodeRAG over diagnosis & treatment medical dataset, real-time query. Data storage on MongoDB, leverage dynamic STM/LTM history caching. Incorporating model fine-tuning and quantization for efficiency. Deployed FastAPI backend with NLPs for multi-language support and NodeJS frontend, via RestAPI.

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.

Linguaphile
Android app for vocabulary learning features mini-games, progress tracking and achievement, with real-time multi-language translation using Google ML Kit.

Roster Management System
Android application streamlining staff rostering and payment management with Kotlin, Node.js, and MariaDB. Deploying at Melbourne warehouse, minimise human-error and accounting labour.