Dean Ng Kwan Lung

Full-Stack Software Engineer | Backend Developer

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🌐 Blog | 🖥 GitHub | 🔗 LinkedIn

PROFESSIONAL SUMMARY

Full-stack software engineer with over 2 years of experience in developing and deploying production-grade systems across backend, frontend, and cloud-native infrastructure. Proficient in building secure APIs, real-time messaging systems, and end-to-end CI/CD pipelines using modern DevOps practices. Adept at delivering scalable, maintainable codebases using Java, Spring Boot, React, and containerized deployments. Open to backend or full-stack roles in fast-paced engineering teams in Singapore or Malaysia.

TECHNICAL SKILLS

Backend Development: Java, Spring Boot, MongoDB, Kafka, Jenkins, REST APIs

Cloud & DevOps: Docker, Kubernetes, OpenShift, GitHub Actions, AWS/GCP/Azure (basic), Flask, FastAPI, Streamlit

Frontend: React (TypeScript), HTML, CSS, Bootstrap

Databases: MySQL, MongoDB

Tools: Git, Linux CLI, VS Code, Postman, IntelliJ, JIRA, Jupyter, TensorBoard

AI/ML (Secondary): PyTorch, Hugging Face, timm, LangChain, LoRA, RAG, OpenCV, FAISS, TensorFlow (basic), Scikit-learn, NumPy, Pandas

PROFESSIONAL WORK EXPERIENCE

Software Developer   **Kuala Lumpur, Malaysia**

AceAtt Sdn Bhd   **Jan 2023 – Current**

- Developed and deployed **AmOnline Lite**, reducing downtime by 30%, ensuring 24/7 uninterrupted banking services (IFT, DuitNow, batch jobs) for over 1 million users using Java Spring Boot, React TypeScript, MongoDB, Kafka, OAuth, OpenShift, and Jenkins. Built REST APIs integrated with OAuth2 and deployed via OpenShift and Jenkins CI/CD.
- Collaborated cross-functionally to deliver end-to-end system enhancements across front- and back-end stacks.
- Engineered and deployed an **OpenAI-driven HR Q&A chatbot** with Flask and Next.js, enhancing HR operational efficiency.
- Implemented and maintained **CIMB Messaging System** leveraging Kafka with Java Tomcat, Servlet, JSP, and JSF, enhancing inter-system communication performance by 25%.

Mediasavers Support   **Kuala Lumpur, Malaysia**

Mediasavers (MXM International), Kuala Lumpur   **May 2022 – Aug 2022**

- Provided technical support for software and hardware systems, ensuring system uptime.
- Gained foundational experience in system troubleshooting and internal IT processes

SELECTED ENGINEERING PROJECTS

End-to-End Facial Expression Recognition System

Self-Directed Project | *January 2025 – Present*

Tech Stack: PyTorch, timm, OpenCV, Hugging Face Datasets, CUDA, Python, GitHub

- Achieved **81.4% validation accuracy** on a 7-class FER task, leveraging advanced augmentation (CutMix), custom LR schedulers, warmup, and mixed precision training. Curated and engineered 3 custom datasets, uploaded to Hugging Face for reproducibility: FER+ (7-class), AffectNet (no contempt), RAF-DB (7 emotions)
- Integrated timm-based ViT-Tiny model into modular pipeline with cosine decay scheduling, AMP, and dynamic batch sizing.
- Shared detailed documentation and insights via a personal blog to enhance community engagement.

AskMyDocsAI: Full-Stack Document QA System with LLM Integration

Self-Directed Project | *January 2025 – Present*

Tech Stack: Python, PyTorch, Hugging Face, LangChain, Retrieval-Augmented Generation (RAG), LoRA, FAISS, FastAPI, Docker, CUDA

- Built an AI-powered document Q&A system delivering over **90% accuracy** in retrieving precise, contextually relevant answers from large documents.
- Fine-tuned **NousResearch's Hermes-2-Pro-Mistral-7B** using **Low-Rank Adaptation (LoRA)** significantly boosting domain-specific performance. Optimized retrieval processes with FAISS, reducing inference latency by **40%**.
- Built scalable RESTful APIs with FastAPI and optimized for GPU-accelerated inference using CUDA, reducing response time under load.
- Open-sourced production-grade codebase with full CI/CD-ready workflows and structured documentation, improving visibility and reuse on GitHub.

EDUCATION

INTI International University   **Nilai, Negeri Sembilan**
Bachelor of Computer Science, Software Engineering   Graduation: Dec 2022
- Conference: International Conference on Innovation and Technopreneurship 2022
  - Thesis: Designing a Research Model for Depression Tendency using Facial Expression Recognition
- **Detection and Recognition of Depression Tendency Using Facial Expression Recognition**
  (May 2022 – Dec 2022**)**
  - Built an **end-to-end software solution integrating a Python backend with CNN-based** inference and a **web-based frontend using HTML/CSS/Bootstrap**. Engineered a **MySQL** database and optimized CRUD performance.

CERTIFICATES

CCNA: Introduction to Networks   **Nov 2021**
International Conference on Innovation and Technopreneurship – Presenter   **September 2022**

INTERESTS & ACTIVITIES

- Building full-stack and cloud-native applications to explore scalability and CI/CD pipelines.
- Blogging software development insights and tutorials at kwanlung.github.io.
- Open-source contributor to GitHub projects in backend systems and tooling.
- Regular engagement with fitness, tech podcasts, and technology exploration, demonstrating discipline and continuous learning.

Languages: Fluent in **English**, **Mandarin**, and **Malay**.