Amirul Azizol

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SUMMARY

Early-career ML Engineer with experience in production NLP systems, LLM pipelines, and scalable backend services. Strong foundation in research and software engineering; interested in impactful AI work and applied ML.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript/TypeScript, Go, SQL, Dart
Frameworks/Tools: Angular, React.js, Spring Boot, FastAPI, Flutter, Docker, AWS (S3, Lambda)
Libraries: Pandas, Numpy, Transformers, Langchain

EXPERIENCE

Machine Learning Engineer   Apr. 2025 – Present
Confidential Global Tech Company (contract via TransPerfect)   *Singapore*
- Served as a vendor language engineer, focusing on multilingual voice assistant features, bugfixes, and R&D.
- Fine-tuned model inputs to support Malay/Indonesian, improving understanding accuracy by **25%**.
- Automated data preprocessing and error analysis pipelines using Python, reducing noise in utterances by **35%**.
- Improved data pipelines on localized datasets for developing agentic and LLM-driven voice assistant features.

Software Engineer Intern   Jan. 2024 – Jun. 2024
Wavelet Solutions   *Subang Jaya, Malaysia*
- Developed, tested, and deployed a major general UI setting applied to 10+ applets in production.
- Refactored a Flutter mobile app to improve overall performance, cutting image and video load times by half.
- Built queue tables and job processors to migrate millions of records from legacy systems to a datalake.
- Performed 20+ micro-frontend deployments, utilizing AWS services such as S3 and Lambda.
- Updated and maintained various CRUD RESTful APIs using Java with Spring Boot.

Other Experience
- Firmware Engineer Intern, Western Digital: Analyzed and fixed high-priority firmware bugs.
- Consultant Intern, Monash Warwick Alliance: Digitalized accounting tools for a local tutoring company.

PROJECTS

Final Year Project - LLM with RAG for VQA   July 2024 – Jan. 2025
- A custom multimodal LLM for answering medical and forensics questions with retrieval-augmented generation.
- Fine-tuned the mPLUG-Owl3 model to answer VQA prompts with RAG - achieved **66%** accuracy on a custom dataset.
- For RAG uploads, uses a custom chunking algorithm with Gemini for contextualizing and summarizing texts, and uses a hybrid retrieval mechanism with cosine similarity and keyword matching.

RxNet   July 2024 – Aug. 2024
- **Finalist** at APU Devmatch and **cash prize winner** at Monash Hackfest.
- A blockchain prescription system built on MasChain / Solana to improve drug traceability and reduce fraud.

Ren   Dec. 2023 - Jan. 2024
- **Top 10 Finalist** at Kitahack 2024.
- A platform for cleaning volunteers, inspired by poor waste management practices.

EDUCATION

Monash University   2022 – 2024
Bachelor of Computer Science, Major in Advanced CS, Minor in Cybersecurity   *Subang Jaya, Malaysia*
- GPA: 3.92 — WAM: 87.1
- Recipient of Monash High Achiever Award (top 1% of cohort) and Industry Based Learning scholarship.
- Worked as a TA for 2 years, teaching Theory of Computation and Intro to Programming.