

# Amirul Azizol

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## OVERVIEW

Early career software engineer based in Singapore with a foundation in backend infrastructure and ML pipelines.

## TECHNICAL SKILLS

**Languages:** Java, Go, Python, TypeScript/JavaScript, SQL, C++, Swift

**Infrastructure & Tools:** AWS, GCP, Docker, Kubernetes, Jenkins, CI/CD, PostgreSQL, Git

**Frameworks:** Spring Boot, FastAPI, React, Next.js, Node.js, Angular

**Machine Learning:** PyTorch, Transformers, Ray, PyArrow

## EXPERIENCE

### Siri Language Engineer

*Apple (via TransPerfect)*

Apr. 2025 – Present

*Singapore*

- Engineered ML pipelines for Malay voice assistant capabilities, working on ASR, NLU, TTS, and agentic LLMs.
- Fine-tuned transformer-based semantic parsing and execution routing models; resolved 200+ regression bugs while maintaining **95% recall and precision** across key intent categories. (PyTorch, Ray)
- Designed and executed ML experiments on preprocessed datasets, achieving a **23% reduction in data noise** via automated filtering heuristics. (Kubernetes)
- Collaborated with data curators to construct high-quality datasets spanning 14 domains (10K+ entries).
- Automated end-to-end UI interaction for voice assistant, reducing manual QA effort by **90%**. (Python, Swift)
- Delivered 50+ localized health features by implementing new logic, triaging bugs, and validating integration tests.

### Software Engineer Intern

*Wavelet Solutions*

Jan. 2024 – Jun. 2024

*Kuala Lumpur, Malaysia*

- Optimized infrastructure and ensured reliability for an ERP processing **1M+ monthly financial transactions**.
- Engineered asynchronous ETL job processors to migrate **5M+ records** to a centralized data lake. (SQL, AWS)
- Designed RESTful APIs using Spring Boot, enforcing strict error handling to meet a **99.9%** uptime SLA. (Java)
- Developed and deployed a UI module for 10+ applets, adopted by thousands of enterprise users. (Angular)

### Firmware Engineer Intern

*Western Digital*

Nov. 2023 – Jan. 2024

*Kuala Lumpur, Malaysia*

- Developed C++ firmware features for enterprise HDDs and Python automation scripts for failure analysis.
- Implemented retry logic in Jenkins pipelines, reducing false positive failures and saving hours of weekly debugging.
- Reduced outstanding bugs by **21%** for the host interface team.

## PROJECTS

### Multimodal, Domain Specific LLM with RAG

- Awarded **2nd best final year project** in cohort for research potential in medical imaging.
- Fine-tuned an 8B vision-language model, improving accuracy by **30%** over baseline by integrating RAG and CoT.
- Architected a vector database with a custom chunking algorithm and a hybrid retrieval algorithm.

### RxNet

- Built a decentralized prescription tracking system with smart contracts to prevent fraud and improve traceability.
- **Finalist** at APU Devmatch and **cash prize winner** at Monash Hackfest.

### Ren

- Developed a gamified environmental community app, ranked Top 10 at Kitahack (for Google Solution Challenge).

## EDUCATION

### Monash University

*Bachelor of Computer Science (Advanced); Major in CS, Minor in Cybersecurity*

Feb. 2022 – Apr. 2025

*Kuala Lumpur, Malaysia*

- **GPA: 3.92/4.0** | WAM: 87.1 (Top 1% of Cohort)
- Awards: Monash High Achiever Award, Industry Based Learning Scholarship.
- Teaching Assistant: Theory of Computation (FIT2014) & Intro to Programming (FIT1045).