Moh. Fadhil Rasyidin Parinduri

+886-986-659-894 | mohfadhilrp@gmail.com | linkedin.com/in/fadhilrp | github.com/fadhilrp

Education

National Taiwan University of Science and Technology — Taipei, TW
Industrial Management — *Sept. 2024 – Present*

Sepuluh Nopember Institute of Technology — Surabaya, ID
Computer Science — *Aug. 2020 – Aug. 2024*

Experience

Research Intern (SWE & LLMOps) — Oct. 2023 – Aug. 2024
National Taiwan University of Science and Technology — *Taipei, TW*

- Developed an advanced Retrieval Augmented Generation **(RAG)** Pipeline utilizing state-of-the-art Large Language Models (LLMs) to enhance knowledge transfer efficiency in Knowledge Management Systems (KMS) Chatbot. Utilizing RTX 4090 & First-gen Intel Gaudi HPU.
- Implemented an LLM inference pipeline using Python and containerized it with **Docker** for scalability and reproducibility. Incorporated HyDe (Hypothetical Document Embeddings) and Reranking techniques.
- Conducted a comprehensive evaluation of a combined 5 closed-source (API) and locally deployed open-source text-generation LLMs, fine-tuning using NLP methods to optimize performance and information retrieval accuracy. Evaluated LLM performance using RAGAS and also through prompt engineering techniques.
- Automated the collection of weather datasets, deploying and simplified data processing and analysis for Building Energy Management Systems using **Grafana** & InfluxDB.
- Created technical documentations, presentations, and proposals about distributed web applications that includes multiple web clients/servers and prompt engineering methods.
- Collaborated with a cross-functional team of 5 researchers and engineers to implement and optimize the RAG Pipeline, fostering a culture of knowledge sharing and continuous improvement.

PHP Web Developer — Jul. – Dec. 2023
ITS Directorate of Postgraduate and Academic Development — *Surabaya, ID*

- Maintained and enhanced vote.its.ac.id, a high-traffic Voting App for ITS Academicians built using Laravel. Optimized performance and user experience, resulting in seamless processing of over 8,000 votes during peak usage.
- Containerized and Utilized Nginx Reverse Proxy for Easy Integration and Application Scaling.
- Developed and integrated critical Election Admin Features for ITS' Chancellor Election 2023, ensuring a secure and transparent voting process. Collaborated closely with the election committee to gather requirements, design intuitive user interfaces, and implement robust access control mechanisms.
- Conducted thorough code reviews, identifying and resolving potential security vulnerabilities and performance bottlenecks. Implemented industry best practices for code quality, maintainability, and documentation.
- Collaborated with a cross-functional team of 3 developers, designers, and stakeholders to deliver high-quality features on time.

Microcontroller & Artificial Intelligence Engineer — Jun. 2021 – Dec. 2023
Banyubramanta Remotedly & Autonomous Underwater Vehicle Robotics Research Team — *Surabaya, ID*

- Designed and implemented an underwater coral 3D modeling application that became crucial to winning an award in a ROV competition.
- Created Biofoul Detection for Sea Cages using Deep Learning for Video Processing methods such as YOLOv5, and conducted research on Deep Sea Robotic Movement Patterns, leading to the team's qualification for Pekan Ilmiah Mahasiswa Nasional (PIMNAS) 35.
- Mentored junior members on Microcontroller Algorithms, fostering knowledge sharing and skill development within the team.

Technical Skills

Languages: TypeScript, Python, C/C++, SQL, JavaScript, HTML/CSS, UML, Kotlin
Frameworks: React, Node.js, Flask, JUnit, WordPress, FastAPI
Developer Tools: Git, Docker, ZeroMQ, RabbitMQ, Jetbrains Products, Triton, Ubuntu, Figma
Libraries: Langchain, LocalAI, llama.cpp, Huggingface TGI-Gaudi, Milvus, Pandas, Pytorch, Transformers, shadcn