

Oswaldo Dylan Hamidy

Jakarta, Indonesia • (+62) 82284972204 • dylanhamidy0909@gmail.com • oswaldodylan.com

Education

Sungkyunkwan University, South Korea

August 2022 – August 2026

B.S. Computer Science and Engineering, *Magna Cum Laude* | GPA 4.22/4.5 | Merit-Based Scholarship, 7 consecutive semesters

Professional Experience

AI & Robotic Software Engineer, Luxolis, South Korea

March 2026 – Present

- Built an end-to-end welding automation stack (Alpine.js UI + FastAPI + C++ DRFL Daemon) driving a Doosan A0912 arm, Raycus CFL laser, and motorized turntable. Used directly in client acquisition demos.
- Containerized company software into reproducible Docker microservices bundling MinIO, Redis, and SQL, with automated build scripts.
- Shipped a React Native (iOS/Android) app with 3D spatial vision; validated spatial package compatibility and ran cross stack integration tests.

AI/Backend Engineer: RAG Pipelines, Saifly, United States (Remote)

November 2025 – February 2026

- Lifted a compliance RAG pipeline from zero baseline to recall@k 0.448 and MRR 0.382 via Docling chunking, pgvector retrieval, and an automated eval framework (recall, precision, MRR, NDCG).
- Built semantic chunking with clause level embeddings and metadata rich vector indexing. Reduced ingestion overhead with async batching, deduplication, and incremental re-indexing.

Design and Marketing Part-Time, Wishcompany, South Korea

March 2023 – February 2026

- Coordinated influencer/UGC campaigns across SEA, and produced localized digital content for Indonesian social media.

Undergraduate Researcher, HLI Lab, Sungkyunkwan University

September 2025 – December 2025

- Evaluated cultural bias across GPT, Llama, Qwen, Claude, and Gemini, and proposed a value based alignment framework using WVS survey data and Schwartz value persona steering.

Selected Project Experience

- [Timbre](#) – Turns a recording into sheet music, routing piano to a ByteDance onset/offset model and everything else to Spotify's basic-pitch behind a swappable registry with fallback. Outputs MusicXML, MIDI and PDF; a Redis queue streams progress over SSE. (Next.js, FastAPI, Redis, PyTorch, librosa, music21, LilyPond)
- [Foodie \(Capstone Design Project\)](#) – Flutter/Firebase mobile app combining a recipes API with an OpenAI image detection model to identify fridge ingredients and recommend recipes to user.
- [Python Face Detector](#) – Uses [face](#) recognition and OpenCV to identify K-pop group members via webcam or screen capture, then plays their songs on Spotify through the Spotify API.
- [Full-Stack Real-Time Chat App](#) – React + FastAPI + WebSockets with DMs, group rooms, file sharing, HTTP range video streaming, and an Ollama-powered AI participant.
- **xv6 OS (Operating Systems)** – Implemented process priority system calls, a Completely Fair Scheduler (CFS), virtual memory management with page faults, and LRU/clock-based page replacement.

Skills

- **Languages/Tools:** Python, C/C++, TypeScript/JavaScript, Node.js, Next.js, React, React Native, Flutter, FastAPI, MySQL, Firebase, Tailwind, AWS, Docker, Git, Linux
- **AI/ML:** PyTorch, Transformers, RAG pipelines, embeddings, vector search, CNN, SVM, GMM, SHAP/LIME, Scikit-Learn, Pandas, NumPy
- **AI Engineering & Robotics:** Multi-agent systems, MCP, agentic workflows, LangChain, Docling, Ollama, AI APIs; ROS2, DRFL Robot API, Arduino (Embedded Software Integration)
- **Languages:** English (fluent), Indonesian (native-fluent), Korean (intermediate)