

DARREL DANADYAKSA POLI

Software Engineer | AI Engineer | AI Researcher

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Final Year Computer Science student with strong expertise across Software Engineering, Backend Architecture, and Artificial Intelligence. Experienced in AI research at **NVIDIA**, production speech model distillation at Meeting.ai, building scalable web and mobile applications (Django, Go, Laravel, Flutter), and leading software engineering teams.

EDUCATION

University of Indonesia

Undergraduate Computer Science

Depok, Indonesia

Aug 2022 – Aug 2026

- **Focus Areas:** Software Engineering, Web & Mobile Development, Deep Learning, Natural Language Processing, Computer Vision, Algorithms & Complexity.
- **Academic Mentorship:** Teaching Assistant for AI and Data Science Introductory Course (2026), Calculus 1 (Short Semester 2026, Regular & International 2023–2024), Software Engineering Project (2025), Operating Systems (2025), and Calculus 2 (2024).
- **Student Psychological Support:** Peer Counselor at Curhat Sama Panda, supporting student mental health at Faculty of Computer Science.

WORK EXPERIENCE

NVIDIA

AI Research Intern

Remote

Jan 2025 – Jun 2025

- **Sequence Architecture Benchmarking:** Evaluated non-Transformer recurrent architectures (**RWKV-v4** & **RWKV-v7**) against **Transformers**, **LSTMs**, and **GRUs** for formal regular language expressivity.
- **CUDA Kernel Implementation:** Developed a custom PyTorch **CUDA C++ WKV Operator** (`wkv_kernel.cu`) for accelerated recurrent state transition computations.
- **Formal Language Evaluation & Hard Negatives:** Designed synthetic benchmarks (L_1 – L_4 covering parity counting, substring matching, and language unions) with 1–3 edit-distance near-miss hard negative perturbations to stress-test model decision boundaries.

Meeting.ai

AI Engineer Intern

Jakarta, Indonesia

Jul 2025 – Dec 2025

- **ASR Performance Stress-Testing:** Benchmarked Automatic Speech Recognition (ASR) pipelines under high concurrency (10+ simultaneous sessions) to isolate latency bottlenecks and ensure deployment stability.
- **Speaker Verification Optimization:** Compression-optimized a Speaker Verification model using knowledge distillation, significantly reducing parameter footprint while maintaining accuracy and achieving faster inference throughput.
- **Active Learning Pipeline:** Architected a user-in-the-loop correction mechanism within the Speaker Verification pipeline to dynamically resolve clustering ambiguities and continuously improve downstream model accuracy.

Intergalactic Science Kingdom

AI Engineer & Back End Engineer (Volunteer)

Remote

Jan 2026 – Jul 2026

- **Marie Chan Full-Stack Architecture:** Architected and deployed *Marie Chan*, an interactive AI system combining Go (Golang) and Django backends for real-time API performance and backend stability.
- **Agentic AI & BDD/TDD Workflows:** Applied Behavior-Driven Development (BDD) and Test-Driven Development (TDD) to guide and validate software engineering workflows powered by Agentic AI.
- **LLM Pipeline Orchestration:** Integrated OpenRouter API for dynamic multi-model LLM routing, optimizing inference latency, context window management, and speech synthesis pipelines.

Indonesia AI x OMDENA Forest Fire Project

AI & Data Science Contributor

Indonesia

Aug 2022 – Sep 2022

- **Data Engineering:** Curated, preprocessed, and normalized multi-source environmental datasets to enhance training data quality for forest fire risk prediction models.
- **Model Fine-Tuning:** Fine-tuned predictive algorithms to maximize early detection accuracy and support proactive community safety initiatives.

VOLUNTEERING & LEADERSHIP EXPERIENCE

Candidate College

Back End Developer

Indonesia

Jun 2024 – Oct 2024

- **RESTful API & Database Engineering:** Developed and maintained server-side logic, databases, and RESTful APIs using Laravel, collaborating with front-end teams and stakeholders to ensure high performance.
- **Database Modeling & Architecture:** Created Entity-Relationship (EER) diagrams and database models aligned with business needs, enforcing clean code practices, design patterns, and scalable software architecture principles.
- **API Documentation & Leadership:** Led Swagger integration for automated API documentation as Co-Head of the Website Development Division, improving API accessibility for internal and external teams.
- **DevOps & Testing:** Implemented CI/CD pipelines and robust test suites to ensure code quality, maintainability, and streamlined deployments.

SIKAP

Software Engineer

Indonesia

Aug 2025 – Nov 2025

- **Cross-Platform Engineering:** Engineered a cross-platform anti-bullying information system using Django for the backend and Flutter for the mobile interface, ensuring secure and anonymous reporting.
- **UAT & User-Centered Design:** Conducted User Acceptance Testing (UAT) across dozens of Indonesian schools, utilizing direct user feedback to refine features and improve system stability following ADDIE and UCD principles.

Student Executive Board (BEM UI)

Coordinator, Information Technology Division

Depok, Indonesia

Jul 2025 – Jan 2026

- **Engineering Leadership:** Directed and reviewed software development workflows, applying industry-standard software engineering methodologies and architectural best practices.
- **Technical Guidance & Quality Control:** Provided hands-on technical guidance on system architecture, maintainability, and quality control mechanisms for ongoing IT projects across multiple divisions.

Rentang Jiwa

Peer Counselor

Indonesia

Jan 2024 – Jun 2024

- **Client Counseling:** Offered structured peer counseling and psychoeducation using counseling psychology best practices to build client rapport and facilitate psychological support.

PROJECTS & ACHIEVEMENTS

- **SafetyPin Startup (2025):** Co-founded SafetyPin, a social security startup leveraging technology and intelligent reporting systems to enhance personal safety solutions.
- **Multimodal Emotion Detection (Satria Data 2025):** Engineered an end-to-end emotion detection system combining BERT for textual feature extraction, Whisper for speech representations, and VAD for noise filtering.
- **Illegal Parking CV System (Gemastik 2024):** Designed and trained an object detection pipeline to identify illegal parking violations from surveillance feeds.
- **BERT Clickbait Classification (Gemastik 2023):** Fine-tuned a BERT-based transformer model on Indonesian textual datasets to detect clickbait headlines.
- **Garuda Hacks 4.0 Honorable Mention (2023):** Awarded Honorable Mention for building *Tak Sendiri*, a conversational AI agent for preliminary depression screening.
- **Certified Peer Counselor Training (2023):** Completed certified training in peer counseling and psychological support.

TECHNICAL SKILLS & EXPERTISE

- **Software Engineering & Backend:** RESTful APIs, System Architecture, Database Design (EER), Microservices, Agentic AI Workflows, Behavior-Driven Development (BDD), Test-Driven Development (TDD), CI/CD, DevOps.
- **Programming Languages:** Python, Go (Golang), Java, PHP, Rust, Dart, SQL (PostgreSQL, MySQL).
- **Frameworks & Libraries:** Django, Spring Boot, Laravel, Flutter, PyTorch, TensorFlow, Keras, HuggingFace, OpenCV, Scikit-Learn, Pandas, NumPy.
- **Developer Tools & Cloud:** Docker, Git, GCP, Supabase, Postman, Linux/Unix, OpenRouter LLM APIs.
- **Soft Skills & Leadership:** Software Engineering Leadership, Code Review, Mentoring, Critical Thinking, Active Listening, Agile/Scrum.