

# Adrian Fahri Affandi

AI & Cloud Enthusiast | East Cikarang, Bekasi Regency, West Java,  
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## SUMMARY

Software Engineer specializing in AI Integration and Backend Infrastructure. Experienced in taking machine learning models from experimentation to production-ready applications. Adept at designing microservices, optimizing database performance, and building low-latency edge AI systems (Raspberry Pi/Hailo). Passionate about bridging advanced AI capabilities with robust backend systems using Go and Python.

## EDUCATION

### INSTITUT TEKNOLOGI BANDUNG (ITB)

**Bachelor of Engineering, Information System and Technology**

Indonesia

August 2021 - August 2025

- Current GPA: 3.44/4.00 (145 credits)
- Relevant courses: Software Engineering IST, Algorithm and Data Structure IST, Object Oriented Programming IST, Database Management, Information System & Technology Services.

### BANGKIT ACADEMY

**Cloud Computing**

Indonesia

Feb 2024 - July 2024

- Average score: 92.90/100 (20 Credits, 965 Hours)
- Graduated with Distinction, ranking in the Top 10% among 4,650 students out of 55,000 applicants.
- Capstone Project: Cinematch, a developed platform that seamlessly integrates social media with AI-driven personalized movie recommendations, aimed at simplifying and enhancing the movie discovery process while fostering community engagement and delivering tailored user experiences.
- Acquired comprehensive knowledge in various aspects of Cloud Computing, including Cloud Computing Fundamentals, Cloud Infrastructure Services (Compute, Storage, Networking), Cloud Platform Services, Cloud Security, and DevOps.

## EXPERIENCE

### AI ENGINEER

**Synapsis**

October 2025 - Present

- Architected and deployed an Edge-to-Cloud Multi-Face Recognition system with Raspberry Pi 5 and Hailo AI accelerators for real-time face detection in enterprise attendance (750+ employees).
- Increased video processing throughput by 150% (8 FPS to 20 FPS) by decoupling AI inference from business logic via multi-threading and thread-safe queues.
- Built a production-grade multi-agent LLM ecosystem for internal support, using a centralized master agent to dynamically route complex queries.
- Developed an advanced Retrieval-Augmented Generation (RAG) pipeline with Perplexity-style inline citations, and boosting document traceability.

### BACKEND DEVELOPER

**Synapsis**

Indonesia

December 2024 - August 2025

- Developed new services and REST/gRPC APIs using Go and PostgreSQL, adhering to Clean Architecture and Domain-Driven Design (DDD) principles to support the rollout of core product features.
- Optimized specific slow-performing endpoints by resolving N+1 query issues and adding database indexes
- Maintained high code quality for new API developments by writing comprehensive unit and integration tests, achieving 80%+ test coverage on assigned modules.
- Collaborated closely with frontend and product teams in an Agile environment to deliver new API endpoints on time and resolve cross-service integration issues.

### BACK END DEVELOPER

**Telkom Indonesia**

Indonesia

June 2024 - August 2024

- Developed endpoints and services using NestJS, Go, and PostgreSQL.
- Identified and resolved bugs to guarantee robust and reliable software performance.
- Streamlined development and deployment processes through the use of Docker for containerization.
- Facilitated seamless data exchange and collaboration by integrating APIs with partner systems.

## PROJECTS

### SEISMIC RISK ASSESSMENT (THESIS)

January 2025 - August 2025

- Built a microservices backend with FastAPI + PostgreSQL/PostGIS for geospatial data management.
- Trained and deployed YOLOv11-based computer vision models for building typology classification.
- Designed a custom model versioning system with rollback support, as part of an MLOps workflow to enable reproducible experiments and structured model lifecycle management.
- Developed an integrated annotation platform that replaced third-party tools, with pre-annotation using existing models reducing manual labeling effort by 40%+.
- Integrated AI predictions into a seismic risk simulation system, allowing custom, region-based analysis of 10,000+ buildings.

### PATROL LIVE TRACKER

July 2025 - September 2025

- Engineered a real-time patrol tracking system using Go, MySQL, and WebRTC stack (LiveKit, Coturn).
- Implemented CCTV and bodycam streaming features, supporting low-latency video delivery at scale.
- Designed fault-tolerant architecture ensuring continuous availability for patrol operations.

### CLUSTER GATE MANAGEMENT SYSTEM

July 2024 - September 2024

- Built IoT-enabled gate access system with C#, Blazor, and SQL Server.
- Integrated hardware devices with backend APIs to enable secure, automated gate operations.
- Deployed on IIS, supporting daily usage by 1500+ residents with real-time event logging.

## CERTIFICATIONS

### GOLD MEDAL IN CATEGORY D1 AT SAFMC 2024

Singapore Amazing Flying Machine Competition (SAFMC)

Mar 2024

- Contributed as Firmware Engineer to a 19-member team achieving Gold Medal at Singapore Amazing Flying Machine Competition.
- Developed and optimized embedded flight control firmware enabling coordination of multiple drones through a single remote system.

### TOP 5 FINALIST OF DIG IN BUSINESS IT CASE COMPETITION BINA NUSANTARA UNIVERSITY

HIMSISFO Bina Nusantara University

Feb 2023

- Recognized as a Top 5 Finalist in the prestigious Dig In Business IT Case Competition, showcasing exceptional analytical and problem solving skills in a competitive environment.

## SKILLS & LANGUAGES

**Skills:** Internet of Things (IoT), Docker, NestJS, Python, Java, SQL, Kubernetes, C++, JavaScript, PHP, CI/CD, Jenkins.

**Languages:** Indonesia (Native or bilingual proficiency), English (Limited working proficiency).