Muhamad Fikri

AI & Data | Software Engineering (Fresh Graduate)

Bandung, Indonesia
fikri23134@gmail.com
linkedin.com/in/muhamad-f-10166a132
+62 823-3719-9097

Summary

Electrical Engineering (ITB) **fresh graduate** (Yudisium Feb 2026) with hands-on experience building **data pipelines** and **production-oriented software systems**.. Interned as an **AI Engineer** (data collection & preprocessing, NLP experiments, cloud datasets), and built an end-to-end **IoT monitoring platform** (telemetry logging, dashboards, alerting) for my thesis. Strong in **Python/SQL** and **Node.js/TypeScript**, comfortable with **Docker/Linux** and cloud databases; known for structured execution, documentation, and follow-through.

Education

Institut Teknologi Bandung (ITB) 2021 – 2026 (Yudisium Feb 2026)
B.Eng. Electrical Engineering GPA: 3.17 / 4.00
Relevant coursework: Probability & Statistics, Digital Signal Processing, Computer Architecture, Microprocessor Systems, Communication Systems

Experience

Serenic.AI — AI Engineer Intern (Bandung) Jun 2024 – Sep 2024

- Built data workflows: web scraping, cleaning, preprocessing; maintained structured datasets for internal users.
- Worked with cloud database/storage (Google Cloud SQL / Storage) and reproducible pipeline practices (versioning, documentation).
- Ran NLP modeling experiments for Indonesian medical text (Word2Vec/FastText and Transformer-based models), and supported deployment in Dockerized environments.

Selected Projects

IoT Public Facility Monitoring Platform (Thesis) — Backend & Data System 2024 – 2026

- Built the server subsystem for telemetry ingestion and monitoring: REST APIs, historical logging, and real-time dashboards.
- Implemented alerting and acknowledgement flow (Telegram bot), plus WebSocket-based updates for operator views.
- Tech: Node.js/TypeScript, PostgreSQL (Prisma), Docker/Linux, Nginx (TLS termination), Cloudflare (DNS/Tunnel).

Secure eMRTD (ePassport) Protocol Simulation — PACE / Secure Sessions 2025 – 2026

- Simulated secure protocol flows (ICAO 9303) with structured validation and clear documentation.
- Implemented ECDH + AES-GCM session establishment and tested edge cases using repeatable test vectors.

Teleoperated Robotic Arm (IMU Control) 2023 – 2024

- Integrated IMU sensors, PID control, and low-latency telemetry for long-distance operation; iterated via systematic testing.

FPGA Lightweight Cryptography (VHDL) 2024

- Implemented and verified a lightweight cipher design with disciplined bit-level testing.

Leadership

HME ITB (Electrical Engineering Student Association) — Vice Minister of Finance 12-month term

- Managed **IDR 700M+** organizational budget end-to-end: planning, compliance, reimbursements, reporting.
- Coordinated across departments; built reliable execution habits (tracking spend vs. budget, closing reports on time).

Skills

Programming: Python, SQL, Java, C/C++, TypeScript/Node.js
AI/Data: pandas/NumPy, scikit-learn; NLP basics; experiment logging; dataset curation

Backend: REST APIs, WebSockets; PostgreSQL; basic system design
Cloud/DevOps: Linux, Git, Docker; Google Cloud SQL/Storage; Nginx; Cloudflare
Security (practical): WireGuard VPN; applied cryptography fundamentals (ECDH, AES-GCM)
Languages: Bahasa Indonesia (Native), English (Professional)