HANIF ARDIYANTA NUGRAHA

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An Electronics and Instrumentation student (UGM) who combines a strong foundation in backend development, specializing in building scalable services and APIs with Node JS, FastAPI Flask Python, and Java with demonstrated leadership. Proven experience in managing technical teams, delivering software prototypes, and initiating high-impact programs, including a collaboration with the Apple Developer Academy. Eager to contribute my proactive problem-solving and product-oriented mindset to a fast-paced software engineer.

Education Level

Universitas Gadjah Mada - Yogyakarta   Jul 2023 - Aug 2027 (Expected)

Bachelor of Electronics and Instrumentation, 3.49/4.00

Universitas Sebelas Maret - Surakarta   Jul 2022 - Jun 2023

Bachelor of Informatics and Computer Technology Education (2 Semesters Completed), 3.70/4.00

- Successfully secured admission to Universitas Gadjah Mada through the university's independent entrance examination (UM UGM CBT) to pursue a program more aligned with hardware-software integration.

Organisational Experience

SKJ (Computer Systems & Networks) & ELINS Laboratories, UGM - Yogyakarta   Jul 2025 - Sep 2025

Head of Software Programmer, G-Connect Project

- Developed a containerized Python FastAPI application (using Docker) to act as a central gateway, processing incoming data and streaming real-time updates to a local dashboard via Server-Sent Events (SSE).
- Led the software architecture design for G-Connect, an end-to-end IoT monitoring system, transforming it into a modular, solar-powered environmental monitoring template.
- Designed and implemented the dashboard UI using Next.js, providing intuitive visualization of real-time environmental data.
- Engineered a modular firmware (in C++) for the MSP430 and ESP32 microcontroller, enabling a customizable data ingestion pipeline that transmits sensor data via HTTP for specific use cases like a planned weather observation station in Imogiri.
- Pioneered the system's full-stack deployment for real-world application, covering everything from low-level embedded programming to local data visualization.

Elins Research Club UGM - Yogyakarta   Mar 2024 - Present

Member of Website Development

- Developed and currently maintain the official club website (erc.elins.id), utilizing WordPress and Elementor to establish a professional online presence and information hub for members and the public.
- Designs and leads JavaScript training sessions for new members to accelerate their technical skill development and integration into the development team.
- Collaborated within a development team to translate client needs into functional web solutions, taking primary responsibility for implementing specific features and ensuring code quality.

Himpunan Mahasiswa Elektronika dan Instrumentasi (HMEI) - Yogyakarta   Feb 2025 - Present

Head of Division Academic and Advocacy

- Leads and coordinates a division of 11 members in executing strategic programs, highlighted by the successful initiation of an alumni-funded scholarship (EFO)
- Initiated and directed high-impact career development programs, including a highly successful socialization event with the Apple Developer Academy, to connect students with top-tier industry opportunities.
- Improved academic outcomes by organizing peer tutorial classes and creating a centralized digital bank for exam questions and course materials.

Technical Skills & Projects

- **Languages**: Python, JavaScript, SQL, Java, HTML/CSS, C++
- **Frameworks & Libraries**: Node.js, Flask, FastAPI, React.js, NumPy, Matplotlib
- **Databases**: MySQL, SQLite, Firebase
- **Tools & Technologies**: Docker, Git, HTTP, MQTT, Android Studio, Verilog, Raspberry Pi, ESP32
- **Concepts & Methodologies**: Data Structures & Algorithms, Object-Oriented Programming (OOP), Embedded Systems, Control Systems (PID), Big Data Concepts, UI/UX Concepts
- **Desktop Cashier Application**: Java, Java Swing (GUI)