

Gunawan Firdaus

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Graduated in Electronics and Instrumentation with GPA 3.65 and a strong foundation in both IoT and backend development. Proven experience as a Full Stack Developer at PPKM UGM, where I developed and maintained web platforms for MBKM Programs. Practical experience in IoT and Automation systems through roles at PAKO Group and Toyota Indonesia Academy, including PLC, HMI programming, system testing and system design. Skilled in hardware and software integration, API development, and developing systems tailored to user needs. Demonstrates strong analytical, problem-solving, and teamwork abilities, with a passion for driving innovative technology solutions.

Organization and Experiences

Full Stack Developer | Oct 2024 – Dec 2024 | Pusat Pelaksana Kampus Merdeka (PPKM) UGM | Yogyakarta

- Developed and maintained website platforms for MBKM (Merdeka Belajar Kampus Merdeka) programs, including Magang dan Studi Independen Bersertifikat (MSIB) and Kampus Mengajar (KM), supporting over 20.000 users, ensuring seamless access and functionality
- Managed and maintained databases for the MSIB and KM programs, ensuring data availability, scalability, and consistency
- Completed 25+ tasks related to bug fixes, database updates, document updates, and other relevant duties
- Created documentation for MSIB platform updates and monthly reports

4.0 Jr. Specialist | Nov 2023 – Apr 2024 | PT. Inkoasku (PAKO Group) | Karawang, West Java

- Collaborated with diverse departments to identify and resolve operational pain points through the development and deployment of tailored digital systems
- Validated system functionality through comprehensive system testing and created user acceptance testing documentation
- Led the implementation of key Industry 4.0 projects, including gas consumption monitoring, cutting line auto counter, and E-LHP, driving efficiency improvements
- Communicated the status and key milestones of digital system development through regular reports and presentations
- Analyzed digital system problems by systematically applying the 4M+1E and 5W+1H problem-solving techniques, resulting in effective resolutions

Supporting Project Internship | Mar 2022 – Aug 2022 | Toyota Indonesia Academy | Karawang, West Java

- Developed comprehensive technical documentation, including user manuals and troubleshooting guides, for Smart Classroom projects
- Developed Industrial IoT simulators using PLC OMRON CP2E-N60DT-D and HMI OMRON NB7W-TW00B
- Conducted thorough system testing and developed detailed User Acceptance Test (UAT) reports, ensuring system quality and user satisfaction
- Developed robust API integrations using FastAPI (Python) to connect PLC devices and servers, enabling seamless data exchange

Hardware Programmer | Nov 2019 – Dec 2021 | Gadjah Mada Aerospace Team | Yogyakarta

- Developed program to control autonomous system use IMU BNO055, BME280, Servo, GPS NeoM8N, and Microcontroller (Teensy)
- Implemented robust wireless sensor data transmission using XBee S2C 2.4 GHz modules, optimizing data packet transmission and error handling for reliable remote data logging
- Performed precise calibration of BNO055, GPS NeoM8N, and BME280 sensors, ensuring accurate data acquisition and system performance

Education

Universitas Gadjah Mada | Yogyakarta

Bachelor Degree of Electronics and Instrumentation | GPA 3.65

Aug 2019 – July 2023

Thesis Title : Implementation of MQTT and COAP on IoT-Based Realtime Monitoring System

Skills and Technologies

- **Soft Skill** : Team Work, Project Management, Analytical Thinking, Problem Solving
- **Programming Language** : Go, Python, C++, Javascript
- **Framework** : Echo, FastAPI, Express, Vue
- **Databases** : PostgreSQL, Redis, MySQL, MongoDB
- **Internet of Things** : Arduino, ESP, Teensy, MQTT, CoAP, Raspberry Pi, PLC, HMI, Azure IoT
- **Office** : Word, Excel, PowerPoint

Course

- Basic Safety Awareness Training Course - PT Toyota Motor Manufacturing Indonesia
- Belajar Membuat Aplikasi Back-End untuk Pemula - Dicoding Indonesia
- Python for Data Scientist and Machine Learning Bootcamp - Udemy
- Cloud Practitioner Essential - Dicoding Indonesia
- Belajar Dasar Pemrograman Javascript - Dicoding Indonesia
- Backend Master Class [Golang + Postgres + Kubernetes + gRPC] - Udemy
- Belajar Jaringan untuk Pemula - Dicoding Indonesia
- Schneider PLC M221 Configuration and Programming with Machine Expert Basic Software - Engineering Academy
- Belajar Membuat Front-End Web untuk Pemula - Dicoding Indonesia
- Belajar Membuat Aplikasi Web dengan React - Dicoding Indonesia
- Pre Security Certificate - TryHackMe
- Advent of Cyber 2024 Certificate - TryHackMe
- Cyber Security 101 Certificate - TryHackMe
- Jr. Penetration Tester - TryHackMe