



FAHRIAN MAULANA FAZRY NURIADY

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SUMMARY

Electrical Engineering student at Bandung Institute of Technology (ITB) with hands-on experience across power electronics, protection & automation, embedded systems, and renewable energy. Experienced in HV substation protection systems, alongside practical project work spanning autonomous robotics, analog circuit design, IoT systems, and solar PV installation. Proficient in C++, Python, MATLAB, LTSpice, KiCad, and microcontroller-based development. Strong problem-solving skills with a consistent track record of delivering engineering systems from concept to real-world deployment.

EDUCATION

BANDUNG ISTITUTE OF TECHNOLOGY

2023 - 2027

Bachelor of Engineering in Electrical Engineering (Expected 2027)
Current Grade Point Average (CGPA) : 3.20 / 4.00

WORK EXPERIENCE

Working Student, PT PLN (Persero)

Jun 2026 - Agt 2026

- Participated in protection relay maintenance across 500kV and 150kV for both GIS and AIS.
- Identified a mechanical safety gap in a GIS motorized DS mechanism where a broken iron rod produces false "DS open" signal to RCP, risking ES interlock release while DS remains physically closed.
- Proposed an innovation using color sensor on the IO disc and make monitoring real-time dashboard to observe DS Status.
- Attended Factory Acceptance Test (FAT) for protection and control panel equipment.

Internship Trainee, PT Graha Usaha Teknik

Jul 2025 - Aug 2025

- Improved on-site data collection efficiency by developing a digital form based input system.
- Integrated the system with an automated Excel reporting feature to generate formatted reports directly from submitted forms.
- Enabled offline data capture with automatic cloud synchronization, improving operational efficiency and data reliability.

PROJECT EXPERIENCE

Autonomus Tracking and Mobilization Tank

May 2026 - Jun 2026

- esigned and built an autonomous combat robot capable of independent patrol, obstacle avoidance, and auto-tracking
- Developed locomotion subsystem with PID speed control, encoder-based 90° pivot turn, and ultrasonic obstacle avoidance
- Implemented distributed architecture integrating Raspberry Pi 4B (OpenCV target detection) and Arduino Mega 2560 (hardware execution)
- Built modular C++ codebase on PlatformIO covering motor control, encoder odometry, PID, and serial communication

2.2 kWp Off-Grid Solar PV Installation (EnergyLab HME ITB)

Jun 2025 - Feb 2026

- Led a multidisciplinary team in designing and deploying a 2.2 kWp off-grid solar PV system
- Conducted load analysis, system sizing, and component selection (PV modules, inverter, battery, protection system)
- Supervised on-site installation, wiring configuration, and commissioning tests
- Coordinated logistics, stakeholder communication, and community technical training

Boost Converter Design

Dec 2024

- Designed and simulated a DC-DC boost converter for voltage step-up application.
- Calculated switching frequency and selected appropriate passive components.
- Built and tested hardware prototype to evaluate voltage regulation performance.
- Analyzed output ripple and conversion efficiency.

Automatic Fish Feeder (IoT-Based System)

Sep 2023 - Dec 2023

- Developed an automated fish feeder integrating Arduino and scheduling system.
- Implemented microcontroller-based timing and motor control mechanism.
- Designed system architecture to improve feeding efficiency.
- Tested hardware reliability and operational consistency.

ORGANIZATIONAL EXPERIENCE

Head of Logistic Department, GALVANIGHT 2024

Jan 2024 - May 2024

- Supervised logistics team to support event operations and on-site coordination
- Developed material distribution plan to optimize workflow efficiency
- Oversaw venue setup and breakdown process
- Ensured smooth execution through structured team delegation

ADDITIONAL INFORMATION

- **Technical Skills:** C++, Python, VHDL, MATLAB, LTSpice, KiCad (PCB Design), Arduino IDE, Microsoft Excel.
- **Languages:** Indonesian (Native), English (Fluent), German (Beginner).