



MUHAMMAD AL-GHAZALI

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Padang, Sumatera Barat

Electrical Engineering graduate with a GPA of 3.61/4.00, with strong interests and competencies in Electrical Engineering, Mechatronics, industrial automation, control systems, Internet of Things (IoT), programming, system integration, electrical installation and wiring, and 3D mechanical design. Skilled in designing, developing, testing, troubleshooting, and implementing electronic, mechanical, and automation systems for industrial and engineering applications. Demonstrates strong technical problem-solving, attention to detail, and a commitment to developing effective engineering solutions.

Education

Politeknik Negeri Padang (PNP) - Padang

Aug 2022 - Sep 2026

Diploma in Diploma IV in Electrical Engineering, 3.61/4.00

- GPA : 3.61/4.00
- Project : NEWS2-Based IoT Vital Sign Monitoring System, PLC-Based Dual-Axis Solar Tracking System, IoT Smart Watering and Plant Monitoring System, IoT-Based Automatic Antenna Rotator, Industrial Automation and Instrumentation Systems, Mechanical CAD and SolidWorks Design Projects, Autonomous Line Follower Robot.

Research Assistant in Politeknik Negeri Padang

Feb 2026 - Jul 2026

Research Assistant in Faculty Research Team

- Contributed to the development and implementation of an IoT-based multiparameter monitoring research project.
- Participated in prototype development, experimental testing, data analysis, and research documentation.
- Collaborated with faculty members in preparing research reports and scientific publication materials.

Internship

VMES 4.0 – PT. Vortex Energy Batam - Kota Batam, Kepulauan Riau

Aug 2025 - Jan 2026

Mechatronics Engineer

- Performed mechanical and electrical assembly for Cartridge Ink Cell, UV Coating Machine, Roller Machine, and MES training systems based on engineering drawings and wiring diagrams.
- Performed PLC, servo drive, inverter, relay, sensor, power, and I/O panel wiring, including pneumatic system installation.
- Performed corrective actions, re-wiring, component replacement, connectivity checks, and final inspections to ensure machine operation complied with engineering specifications.

TELKOMSEL (MSIB BATCH 7) - Kota Pekanbaru, Riau

Sep 2024 - Dec 2024

Network Deployment and Operation Intern

- Supported BTS Quality Control and tower audits, including KPI, availability, alarms, antennas, RRU, feeders, power systems, and grounding inspections.
- Developed a Customer Complaint Management (CCM) dashboard to monitor complaint trends, MTTR, root causes, availability, capacity, coverage, and transport issues.
- Developed an ESP32 and Blynk IoT-based automatic antenna rotator prototype for remote sector antenna positioning.

Organisational Experience

UKM ROBOTIK PNP - Cadiak Pandai Team (Robot ABU Robocon) PADANG

May 2023 - Feb 2024

Member Team

- Designed robot mechanical components using SolidWorks.
- Contributed to robot fabrication, assembly, programming, testing, and troubleshooting.
- Developed embedded control programs using C/C++ and Arduino IDE.
- Supported technical documentation and regional competition preparation.

Achievements, Projects, Skills

- **Achievements**  (2025): Internship in PT VMES 4.0
- **Achievements**  (2024): MSIB BATCH 7 (Internship in Telkomsel)
- **Achievements** (2024): ABU Robocon Regional Competition (KRAI) Participant
- **Achievements**  (2023): Publication and Documentation Division – Minangkabau Robotic Contest (MRC) VII

- **Projects** (2026): IoT-Based NEWS2 Vital Sign Monitoring System | Mechanical CAD & 3D Engineering Design Projects
- **Projects** (2025): PLC-Based Dual-Axis Solar Tracker
- **Projects** (2024): IoT Smart Watering & Plant Monitoring System | IoT-Based Automatic Antenna Rotator
- **Projects** 📌 (2023): Industrial Automation & Instrumentation Systems | ABU Robocon Robotics Development Project
- **Tools**: SolidWorks,(C++,Visual Studio Code,Arduino IDE),CX-Programmer,LOGO Siemens, Autocad,Microsoft Office(Ms Word,Ms PowerPoint,Basic Ms Excel,Power BI),,Canva
- **Hard Skill**: Electrical & Electronic Systems
Industrial Automation & PLC
IoT & Embedded Systems
Programming & Control Systems
Electrical Wiring & Troubleshooting
Sensor Integration & Instrumentation
3D CAD & Technical Drawing
Data Acquisition & Analysis
- **Soft Skills**: Problem Solving
Analytical Thinking
Team Collaboration
Technical Communication
Adaptability
Attention to Detail
Time Management
Continuous Learning
- **Training** 📌 (2024): Pelatihan SoftSkill "Character Development Training"
- **Language**: Indonesia,Inggris(Intermediate)