

Areta Vahtsa Nur Kirana

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Electronics & Instrumentation graduate from Universitas Gadjah Mada with hands-on experience in industrial electrical systems, PLC-based control, circuit troubleshooting, and calibration. Skilled in reading technical drawings and producing maintenance documentation (wiring diagrams, SOPs, technical reports), with a track record of applying structured, data-driven problem-solving to reduce downtime and improve system reliability. Comfortable working cross-functionally with production and engineering teams, and eager to grow within a structured electrical maintenance program.

EDUCATION

Universitas Gadjah Mada

Yogyakarta, Indonesia

Bachelor's degree in Electronics and Instrumentation

Nov 2025

- GPA: 3.45/4.00
- Related Courses: Microcontroller, Artificial Intelligence, Control System, PLC, Analog Electronics, Digital Electronics, Industrial Instrumentation, Digital Signal Processing, Sensor System, Actuator System.

WORK EXPERIENCE

Electronics-Instrumentation Laboratory Assistant

Yogyakarta, Indonesia

Department of Computer Science and Electronics UGM

Feb 2025 - Jun 2025

- Designed and delivered laboratory modules for Microcontroller courses, overseeing electronics design validation and troubleshooting for 60 students to ensure system reliability and performance.
- Conducted hands-on troubleshooting of electronic circuits and embedded systems, reinforcing applied skills in sensors, actuators, and control logic.

AI Engineer Intern, Widya Inovasi Indonesia [\[Certificate\]](#)

Yogyakarta, Indonesia

Magang dan Studi Independen Bersertifikat

Feb 2024 - Jul 2024

- Contributed to technical debugging, system integration, and deployment workflows for a software product, strengthening structured problem-solving and technical documentation skills applicable to industrial maintenance environments.

PV Designer Associate

Jakarta, Indonesia

Gogerylya SRE Indonesia Project

Oct 2022 - Dec 2022

- Designed and evaluated 20+ solar PV systems, focusing on electrical system capacity and long-term reliability in remote locations.
- Improved design precision by 20% through rigorous technical feasibility assessments and site-specific electrical system analysis.
- Produced technical documentation delivery (performance estimates and Bill of Material) for 20+ installations, ensuring implementation efficiency for community-based projects in challenging terrains.

PROJECT EXPERIENCE

[Gama Empower](#)

Yogyakarta, Indonesia

Academic Excellence Research Grant from UGM

Mar 2025 - Present

- Managed the full project lifecycle of an AI chatbot solution, from initial design and API integration to successful live deployment for a 60-employee organization, demonstrating effective project management and implementation.
- Applied advanced Prompt Engineering strategies to optimize user experience and sensitive communication, ensuring empathetic support for 60 employees.

[Auto-Annotation for Car Perception Images](#)

Final Project

Feb 2025 - Jun 2025

- Engineered an automatic annotation model utilizing PyTorch to transfer 3D labels to 2D perception images, achieving a 70% accuracy rate based on IoU and panoptic quality metrics, thereby enhancing labeling precision for autonomous vehicle datasets.

[Carbon Capture System for PT. Pupuk Kujang](#)

- Developed a data-driven industrial solution (IGCC & CO₂-EOR) to address petrochemical emission challenges, achieving a 95% carbon capture rate and 5-15% increase in yield production, demonstrating a dual focus on environmental sustainability (ESG) and operational profitability.

Heat to Electricity Converter Oven Integrated with IoT

GemasTIK 2022 Smart Device, Embedded System, and Internet of Things Final Stage Project

Mar 2022 – Sep 2022

- Developed a Waste Heat Recovery (WHR) system using TEG to convert residual heat into electricity (5-6 Watt per TEG panel) and controlled with ESP32 and ATmega328 to support Internet of Things aspect fulfilled by mobile-based remote monitoring.

LEADERSHIP EXPERIENCE

Head of Research and Technology Department

Yogyakarta, Indonesia

Himpunan Mahasiswa Elektronika Instrumentasi UGM

Mar 2023 - Mar 2024

- Managed and supervised two core divisions with 20 members within the Research and Technology Department.
- Directed strategic planning for national-level competitions (robotics and scientific papers), managing 40+ student participants and 200+ total attendees.

Officer of Academics Division

Yogyakarta, Indonesia

Society of Renewable Energy UGM

Nov 2022 - Dec 2023

- Designed and executed monthly Renewable Energy classes involving 50+ participants and actively collaborating with industry practitioners, lecturers, and activists. Organized a Solar PV Software Training event with Pertamina NRE for over 50 participants.
- Contributed as a writer and reviewer for the publication, "*Transisi Energi Berkeadilan*" (Energy Transition), in collaboration with Dewan Energi Mahasiswa UGM. Produced several publications on renewable energy, achieving 100+ impressions per publication.
- Selected as Vice Project Leader at the AGENSI Awarding Day 2023 (Astra Indonesia). Led a team of 10 people to successfully produce a renewable energy podcast within two weeks.

CERTIFICATIONS

2026: [Data Science for Internet of Things \(Short Course\) – BPVP Kab. Sidoarjo](#)

2025: [Oracle Cloud Infrastructure 2025 Certified Generative AI Professional](#)

2025: [Oracle Cloud Infrastructure \(OCI\) Data Science Professional](#)

2023: [DeepLearning.AI TensorFlow Developer](#)

SKILLS

• Technical Skills

Maintenance & Electrical: PLC (Omron CX-One, Allen Bradley), Industrial Instrumentation, Calibration, Control Systems, AutoCAD 3D Plant, Circuit Troubleshooting, Sensors & Actuators, Preventive Maintenance.

Data Management: Python (PyTorch/TensorFlow), SQL, BigQuery, Predictive Modeling, Data Visualization (Power BI/Tableau), MATLAB, IoT Protocols (MQTT/HTTP).

Technical Writing: Thesis writing, Internship & lab reports, coding documentation.

• Soft Skills and Management Skills

Problem-Solving & Critical Thinking: Fieldwork Readiness & Adaptability, Safety adherence and enforcement, Root Cause Analysis.

Leadership and Team Coordination: Task assignment, Team management, Collaboration with maintenance and engineering teams.

Communication: Written publication, Pitching, Scientific presentation, technical instruction.

