

SHELA AGA PEDRANANDA

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PROFESSIONAL SUMMARY

Electrical Automation Engineer with 1.5+ years across FMCG, manufacturing, and R&D. Delivered measurable impact through data-driven problem-solving, cross-functional collaboration, and process optimization across diverse industries.

EDUCATION

Institute of Technology Sepuluh Nopember

Surabaya

B.A.Sc. in Electrical Automation Engineer / GPA: 3.49

Graduated Sep 2025

- Thesis: Pressure Control on Conveyor Pneumatic Using PID Method
- Relevant Coursework: Robotics | Control System | PLC | Maintenance and Repair Technique | Pneumatic & Hydraulic | DCS & SCADA | Industrial Instrumentation | Logic Circuit | Microprocessors & Microcontrollers

EXPERIENCE

Filtrona

Sidoarjo

Electrical Engineer - R&D

Jan 2026 - Present

- Conduct **preventive maintenance** and spare part replacement activities, reducing overall downtime by **25%**.
- Analyzed **electrical faults** using wiring diagrams, PLC diagnostics, and inverter to **improve troubleshooting**.
- Identified recurring SSR short-circuit failures caused by missing heatsink components across **9 filter** manufacturing machines; **designed and implemented** heatsink installation solution, eliminating SSR-related breakdowns for **more than five consecutive months**

PT Sari Enesis Indah

Bogor

TPM - Engineer

Nov 2025 - Jan 2026

- Reprogrammed PLC logic and modified HMI interfaces, increasing **operational efficiency by 15%**.
- **Led troubleshooting** during TBC **palletizer robot** overhaul with **Chinese** vendor, restoring full machine operation via PLC online diagnostics and **force-on ladder** execution.
- **Conducted** preventive and corrective maintenance on production machines across **multiple manufacturing lines** in accordance with TPM schedules and SOP standards.

PT Bogasari Flour Mills

Surabaya

Automation Engineer

Nov 2024 - Jan 2025

- **Assisted** in troubleshooting and maintenance activities on automation systems **across 3 production** lines.
- **Developed** PLC and VFD-based **PID control** system for a **75kW** pneumatic conveyor motor, **reducing** average operating frequency from **50Hz to 46–47Hz** and achieving a **9% energy consumption** reduction while maintaining material throughput of **21–35 tons/hour**.

PT Multi Daya Mitra

Surabaya

Automation Engineer

Nov 2023 - Oct 2024

- Delivered **10 industrial** Gas Detector Early Warning System (EWS) **projects end-to-end**, covering hardware specification, panel wiring, PLC & HMI programming, workshop FAT, site commissioning, and client handover.
- Configured **Modbus RTU/TCP** communication between PLC, **power meter** for the E-RTG project, improving real-time monitoring capability and system visibility.
- Designed CIMON **SCADA for SWRO** systems based on client requirements, supporting monitoring.

LEADERSHIP & ACTIVITIES

Department of Electrical Automation Engineering Organization (DTEO)
Staff of Student Welfare Division

Surabaya
Jan 2024 - Dec 2024

- Coordinated scholarship and academic development programs for 100+ students.

World Robot Olympiad (WRO)
Technical Judge

Surabaya
Apr 2023 - Aug 2023

- Evaluated technical performance and scoring criteria for 50+ senior division participants at an international-level robotics competition.

Robokidz Robot Olympiad (RRO)
Head of LEGO Competition Division

Surabaya
Aug 2022 - Feb 2023

- Led coordination of LEGO robotics competition involving 25+ participants.

SKILLS

- Technical Skills: Siemens S7-300/1200/1500 (TIA Portal) | Omron + Temperature Control | Schneider M221/M241 | Mitsubishi FX & Q Series | AutoCAD Electrical | Wiring Diagram | HMI & SCADA | Profinet | Modbus RTU/TCP | VFD & Motor Control | PID Control | Preventive & Corrective Maintenance | Electrical Troubleshooting | Machine Installation & Modification | Electrical Panel & Control Wiring | Spare part Inspection & Replacement.
- Transferable & Professional Skills: Data Analysis & Performance Reporting | Cross-functional Project Coordination | Vendor & Stakeholder Communication | Root Cause Analysis & Structured Problem-Solving | SOP Development & Technical Documentation.

ADDITIONAL INFORMATION

Languages: Indonesian (Native) | English (Professional Working Proficiency)