



DAFFA ALTHAF RIDOVANI

ELECTRICAL ENGINEER

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PROFESSIONAL SUMMARY

Electrical Engineering graduate with experience in industrial automation, instrumentation, PLC/SCADA/HMI, 4–20 mA systems, HART calibration, robotics, as well as software engineering and AI/ML development. With nearly 2 years of full-time and 4 years of freelance software engineering experience, eager to build a career in Electrical & Control Engineering, with a strong interest in industrial automation, instrumentation, and control systems.

EXPERIENCE

Robotics & Software Engineering

January 2026 – June 2026

Smart Greenhouse UNSRI Indralaya - Research

- Built a 3-axis CNC gantry system with stepper motors, Raspberry Pi 4, and ESP32 to autonomously scan 27 chili trees across a 90m² greenhouse with <1% movement error.
- Designed and trained a YOLOv11 computer vision model to automatically detect and classify chili ripeness, achieving over 90% detection accuracy compared to manual inspection.
- Developed a full-stack web dashboard with Next.js and PostgreSQL for real-time monitoring and control, validated through 7 days of live field testing and achieving over 90% system reliability.

Electrical & Instrumentation Engineer Internship

July 2025 – September 2025

Maintenance Area II - PT Kilang Pertamina Internasional RU III Plaju

- Analyzed end-to-end process instrumentation for pressure, temperature, flow, and level measurement in the Polypropylene production unit, including PLC/SCADA/HMI communication and 4–20 mA signal systems, calibrated 4 transmitters using HART Communicator.
- Evaluated Pressure Transmitter (PT-2210) maintenance for reactor D-2201 and designed a Control Ticket system to standardize scheduling and documentation, improving tracking efficiency by 20%.
- Recommended adding redundant pressure transmitters to the D-2201 interlock system, reducing the risk by 50% from single point of failure across 3 critical pressure measurement points.

Freelance Software & Robotics Developer

November 2022 – Present

- Delivered 20+ paid projects spanning web and mobile application development, robotics, AI/ML model development, and electrical/technical systems for institutional and private clients.
- Served clients including PLN Electrical Services, PLN Haleyora Power UP 6, and BP3MI Sumatera Selatan, achieving 95% project completion and client satisfaction rates.

Full-Time Software Engineer

January 2025 – September 2026

PT Taruna Anugerah Mandiri

- Built and maintained 10+ internal systems, including inventory management, project workflow tracking, field documentation, attendance, and document management, reducing manual processing time by up to 30% and leading the integration of 6+ standalone tools into a unified ERP platform.
- Managed 4 bare-metal internal servers hosting company applications, ensuring 99% uptime through a self-built smart monitoring and maintenance system.

EDUCATION

Sriwijaya University

(2022 – 2026)

Bachelor of Electrical Engineering – Grade 3.89

ORGANIZATIONS

Society of Renewable Energy UNSRI

(2024 – 2025)

Member of Brand & Marketing

- Designed and illustrated 6+ visual communication materials, including posters, infographics, and social media content, to support SRE's educational campaigns and program publications.
- Contributed to the publication and promotion of the Abdi Negara program, including the installation of a 2,000 Wp solar power system in Kampung Kreatif Sugih Waras.
- Participated in and supported the execution of 10+ events as both a participant and organizing committee member, contributing to event promotion and branding initiatives for SRE UNSRI.

Google Developer Student Clubs (GDSC) UNSRI

(2023 – 2024)

Member of Front End Development

- Developed skills and completed 5+ web application projects using modern technologies including Next.js, React, Tailwind CSS, and Git.
- Collaborated cross-functionally with Backend, UI/UX, and Machine Learning teams through Git-based development workflows.
- Served on the organizing committee for 4 internal and external events hosted by GDSC UNSRI.

UNSRI Electrical Engineering Student Association (HME UNSRI)

(2023 – 2024)

Member of Media Informasi dan Komunikasi

- Designed and produced 5+ visual communication materials, including posters, infographics, and social media content, to promote HME UNSRI activities and work programs.
- Documented and published 6 HME UNSRI events and activities through photo, video, and recap content.

My UNSRI

(2023 – 2024)

Programmer/Engineer

- Designed, developed, and maintained a company profile website using Laravel, ensuring reliable performance and up-to-date information throughout a 10-month period.
- Contributed to the production of 2–3 social media content pieces per month, supporting content creation both behind the scenes and as an on-camera talent.

CERTIFICATES

- Front-End Developer Member – Google Developer Student Clubs (GDSC) Universitas Sriwijaya
- From Wire to PLC, A Bootcamp In Industrial Automation – Udemy
- Learn Siemens PLC & HMI 2025: TIA Portal V20 Complete Course – Udemy

SKILLS

- Technical Skills: Robotics & Control, PLC/SCADA, Instrumentation Maintenance, Wiring & Electrical Design, AI/ML Development, Website & Mobile App Development, 2D & 3D Design
- Software Proficiency: TIA Portal, CXProgrammer, Machine Expert, WinCC, Wonderware, Proteus, Solidworks, MATLAB/Simulink, ETAP, AutoCAD, Autodesk Eagle, Arduino IDE, VS Code, Jupyter Notebook, MS Excel
- Programming Languages: PLC (Ladder Diagram & Structured Text), Python, Javascript, C/C++
- Languages: Indonesian (Native), English (Professional), Japanese (Elementary).