Riyan Septiana

Engineer

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ABOUT ME

I am a Mechatronics and Automation graduate from Bandung Manufacturing Polytechnic, with over two years of hands-on experience in industrial automation at Continental Automotive Hungary. A passionate and results-driven Automation Technician, specializing in PLC programming, machine optimization, and system integration for smart manufacturing environments. Skilled in troubleshooting, continuous improvement, and ensuring high equipment reliability and production efficiency. My practical experience spans across multiple automation domains, including: • Smart Infusion Monitoring System – Designed an IoT-based medical device integrating Arduino, ESP32, PID control, and SCADA dashboard for real-time monitoring. • Ventilator Indonesia (Vent-I) – Developed real-time respiratory algorithms and patient monitoring logic for an emergency ventilator system • Automated AC & Server Room Monitoring – Implemented an IoT temperature control and alerting system using Telegram Bot and Antares Cloud for remote monitoring. Proficient in PLC (Allen-Bradley, Siemens, Omron), HMI/SCADA (Wonderware, LabVIEW), IoT systems, pneumatics, and motor control. Experienced in data acquisition, control logic design, and system commissioning. I thrive in collaborative, high-paced industrial environments and am now seeking to advance into an Automation Engineer / Control Systems Engineer role—where I can apply my technical foundation, analytical mindset, and cross-cultural experience to deliver innovative automation solutions.

EXPERIENCE

Technician — 04/2024 - Now
Continental Automotive Hungary Kft.

- Diagnose and troubleshoot issues in automated machines and industrial robots, minimizing downtime in mass production.
- Analyze root causes of recurring failures and optimize machine settings for improved efficiency
- Perform machine and robot calibration, adjustments, and system resets to restore optimal performance.
- Collaborate with engineers to resolve complex issues beyond daily troubleshooting.
- Communicate with cross-functional teams (technician coordinators, line leaders, analysts, and operators)
- Create detailed technical reports and failure analysis to enhance future problem-solving strategies.

Operator Production — 03/2023 – 05/2024
Continental Automotive Hungary Kft.

- Operated and monitored automated machines and industrial robots to ensure smooth production flow.
- Conducted basic troubleshooting and adjustments to maintain machine efficiency and reduce defects.
- Collaborated with technicians and engineers to report and resolve technical issues.
- Performed quality checks to ensure products met industry standards.
- Maintained detailed production logs and assisted in process improvements to optimize workflow.

Research member — 10/2021 - 08/2022
Lecture research – Smart Infusion Monitoring System

- Developed an automated infusion control system with PID algorithms for precise flow regulation.
- Designed a real-time monitoring system using Nextion HMI, and integrated IoT communication Arduino Nano and ESP32.
- Implemented a cloud-based SCADA system on Raspberry Pi, with user authentication and database integration
- Set up real-time alarm notifications for flowrate errors, air bubbles, fluid blockages, delayed drip transitions, and excessive fluid volume.
- Utilized MQTT for seamless communication between devices and real-time data tracking on an interactive dashboard.

Research member — 06/2021 - 09/2021
Sibernetika Teknologi Industri – Ventilator Indonesia

- Developed algorithms for calculating I:E (Inspiratory/Expiratory ratio) and RR (Respiratory Rate) based on motor timing and sensor data (flow meter, pressure).
- Implemented algorithms for detecting abnormal breathing patterns (e.g., irregular sensor readings) and patient resistance (e.g., double peak exhale or lack of inhale), triggering fighting alarms and spurious alarms.
- Optimized ventilator control logic to align inhale and exhale times with set parameters, ensuring efficient ventilator operation.
- Integrated Arduino Nano for sensor data acquisition and Raspberry Pi for system control and communication via Node-RED.
- Built real-time HMI interface for parameter setting and visualized data on Grafana to monitor key metrics.

Project Engineer 02/2021 - 06/2021
Puskomedia Bandung Manufacturing Polytechnic

- Developed an automation system for 3 air conditioners in a server room, using millis timing for 24-hour operation rotation.
- Integrated a temperature sensor to send data to Antares platform, with Telegram bot notifications.
- Designed a motion detection system to automatically control lights, ensuring energy efficiency by turning lights on/off based on activity.
- Responsible for BoM, program development, wiring execution, and SOPs for operation and maintenance.

EDUCATION

Automation Engineering 09/2018 - 10/2022
Bandung Manufacturing Polytechnic

- Graduated with Bachelor of Applied Engineering (S.Tr.T) with GPA: 3.6/4
- Successfully completed coursework in electronic programming, electric, electronic, data acquisition, internet of things, interface and database, which provided me with a strong foundation for developing innovative electronic products
- Successfully completed coursework in electrical, pneumatic and hydraulic system which provided me with a strong foundation in control system
- Successfully completed coursework in PLC programming, HMI design, and SCADA systems, and enterprise automation which provided me with a strong foundation in industrial automation.

Aircraft Body Construction 06/2015 - 07/2018
12 Vocational High School Bandung

- Graduated with the highest National in Aircraft Body Construction major
- Successfully completed courses in sheet metal forming, aircraft welding, engineering drawing, and composite materials as basic skills of aircraft mechanics

ORGANIZATION

DPM-KM POLMAN Bandung 02/2019 - 02/2021
Chairman of The Supervisory commission

- Successfully evaluation of the Polman Student Executive Board ministry, ensuring accountability and transparency
- Successfully implemented 14 programs which is the most program completion during my periode
- Successfully train and produce 3 candidates for leaders in the next period

MTH HIMAMO POLMAN Bandung 02/2019 - 02/2021
Chairman of commission 1 for aspirations

- Successfully building the foundation of legislative organization in HIMAMO
- Complete all work programs 3 of the 3 programs that have been planned
- Developed and implemented a new set of rules for the commission, ensuring a fair and transparent process for collecting and addressing student aspirations.

ACHIEVEMENT AND THE OTHER

- Successfully obtained Certification of PLC Fundamentals By Paul Lynn's PLC Dojo studies in the fundamentals of PLC programming using the Ladder Diagram paradigm
- Successfully obtained Certification of Applied Logic By Paul Lynn's PLC Dojo for having demonstrated the mastery and resourcefulness necessary to solve a wide variety of complex automation problems using ladder diagram programming independently and completely unassisted
- Successfully obtained Certification of Complex Industrial Electrical Maintenance from the National Professional Certification Agency of Indonesia, demonstrating my expertise in electrical maintenance and troubleshooting
- Earned Certification of Complex Industrial Electrical Maintenance Junior Engineer from the National Professional Certification Agency of Indonesia, demonstrating my expertise in pneumatic, hydrolic and PLC troubleshooting.
- Awardee scholarship of academic achievement improvement scholarship on 2019
- Won the Champion 4 award in the selection of outstanding students at Polman Bandung in 2021
- Led a team of 5 volunteers in a community service project, resulting in the successful automation of ablution places in the village of Ciela Bayongbong Garut, improving sanitation and hygiene for the local community.
- Successfully organized and executed the 2021 DPM BEM Member Inauguration
- Successfully organized and executed organization and leadership training 2019
- Successfully organized and executed Executive of the 2019 Himamo AD/ART Meeting
- Become a moderator in the agenda of providing leadership material at the 2021 Organization and Leadership Training
- Become Secretary of the Polman Bandung General Election Supervisory Body 2022
- Become presidium 1 at the 2019 Himamo AD/ART session