

# Riyan Septiana

Engineer

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## ABOUT ME

I graduated from Bandung Manufacturing Polytechnic with a major in Automation and Mechatronics. A highly motivated and results-driven technician with 2 years of experience in industrial automation at Continental Automotive Hungary. Skilled in troubleshooting and resolving complex technical issues, improving production efficiency, and ensuring smooth machine operations. I have hands-on experience in developing industrial automation projects, including:

- Smart Infusion Monitoring System – Integrated Arduino, ESP32, IoT, PID control, and SCADA dashboard for real-time patient monitoring.
- Ventilator Indonesia (Vent-I) – Developed respiratory algorithms and real-time patient monitoring for a ventilator system.
- Automated AC & Server Room Monitoring – Designed an IoT-based temperature control system with Telegram Bot alerts and smart automation.

Proficient in electronics, electrical systems, pneumatics, motor control, data acquisition, SCADA, PLC, IoT, and microcontrollers. Experienced in team collaboration, leadership, time management, and communication, with a background as Head of Commissioning in a legislative organization. Seeking a challenging role in a dynamic and fast-paced environment where I can apply my technical expertise and leadership skills to drive innovation and efficiency.

## EXPERIENCE

- Technician

Continental Automotive Hungary Kft.

04/2024 - Now

  - 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

Continental Automotive Hungary Kft.

03/2023 – 05/2024

  - 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

Lecture research – Smart Infusion Monitoring System

10/2021 - 08/2022

  - 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

Sibernetika Teknologi Industri – Ventilator Indonesia

06/2021 - 09/2021

  - 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.

- 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  
Bandung Manufacturing Polytechnic

09/2018 - 10/2022

- 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  
12 Vocational High School Bandung

06/2015 - 07/2018

- 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  
Chairman of The Supervisory commission

02/2019 - 02/2021

- 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  
Chairman of commission 1 for aspirations

02/2019 - 02/2021

- 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 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 presidium 1 at the 2019 Himamo AD/ART session
- 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 2021