

# Muhammad Daffa Safriel Sabilillah

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## Profile

National robotics champion and Driven automation engineering student with a strong foundation in control systems and industrial robotics. Experienced in designing and optimizing electrical systems using Omron and Mitsubishi PLCs, as well as microcontroller-based embedded systems. Passionate about transforming complex engineering challenges into efficient, real-world solutions through interdisciplinary collaboration. Open to meaningful partnerships and technology-driven innovation to advance smart manufacturing and automation landscapes.

## Education

**Sepuluh Nopember Institute of Technology** – GPA: 3.21/4.00

Aug 2022 – Present

*Bachelor Degree in Automation Electronic Engineering*

## Key Engineering Experience (selected)

**PT. Unilever Indonesia** – Automation Engineer Intern

Feb 2025 – Present

- Engineered data-driven solutions to optimize factory logistics using Digital Logistics Environment Systems, enhancing operational efficiency through real-time anomaly detection.
- Developed and maintained Automated Guided Vehicle (AGV) systems by applying queuing theory and diagnostics analysis to improve routing efficiency and reduce idle time.

**PT. Pertamina Trans Kontinental** – Project Leader of ARSY B MARK II

Aug 2023 – Nov 2023

- Led a 5-member Automation Engineering team to deliver 3 critical project milestones (hull maintenance, 'Return to Home' feature, vision integration), completing all tasks on schedule and reducing cross-team miscommunication
- Drove team progress toward 3 primary goals: Hull and propulsion maintenance, 'Return to Home' development, as well as vision system integration, resulting in improved navigational accuracy and enhanced system responsiveness.

**Banyubramanta Underwater Robotics Team** – Head of Electrical Technician Division

Feb 2023 – Present

- Served as Project Officer for the Banyubramanta team at KRBAI 2024, driving effective interdisciplinary collaboration.
- Achieved 1st place at the national level, laying the foundation for future participation in international competitions.

## Awards & Achievements (selected)

**1st Place National Kontes Robot Bawah Air Indonesia** 🏆

Jul 2024

*Issued by PUSPRESNAS*

**Best Strategy National Kontes Robot Bawah Air Indonesia** 🏆

Jul 2024

*Issued by PUSPRESNAS*

**1st Place Mate ROV ASEAN** 🏆

May 2023

*Issued by Mate ROV*

## Impact Projects (selected)

**Food Dehydrator** | 📄

- Designed the hardware for a food dehydrator aimed at helping SMEs optimize fruit drying, improving reliability over traditional sun-drying methods. Utilized ESP32 for temperature control and real-time monitoring.

**Smart City: IoT-based Earthquake and Wind Speed Detection System** | 📄

- Engineered the hardware for an IoT device that detects early signs of natural disasters via seismic and wind speed sensors. Integrated data visualization through a website interface using ESP32 and Blynk platform. Won 3rd place in GEMASTIK 2024.

**Smart Farm IoT Device** | 📄

- Independently developed an IoT-based agriculture device using ESP32 and Blynk, featuring humidity, temperature, TDS, and pH sensors. Enabled real-time data access and improved irrigation control for remote farms.

## Certificates

**Electrical Safety Training**

Apr 2025

*Issued by NYC Construction Safety Training* | Credential ID NYCCST-20250410-53195733 🏆

**Python Machine Learning**

Apr 2025

*Issued by Udemy* | Credential ID UC-a96b7498-9adb-4448-81ed-88c5a475ba40 🏆

**PLC Training**

Nov 2024

*Issued by ITS Tekno Sains* | Credential ID 02140/T071/TSA/XI/2024 🏆