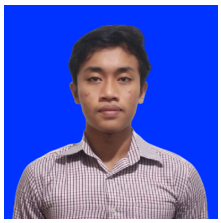

MUHAMMAD DAFFA SAFRIEL SABILILLAH

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SURABAYA, JAWATIMUR.

Student with a strong passion for technological innovation, particularly in creating effective and efficient engineering solutions. Currently, I am focused on the development of robotic systems, especially in control and electrical planning. I have experience working with Omron and Mitsubishi PLCs, Microcontrollers, and team management. I am always open to collaboration opportunities and discussions on technology-based projects.

Education Level

Institut Teknologi Sepuluh Nopember - **Surabaya** Aug 2022 - Aug 2026 (Expected)

Bachelor Degree in Automation Electronic Engineering, 3.33/4.00

State Senior High School 5 Surabaya - **Surabaya** Jun 2019 - Jun 2022

High School Diploma in Natural Science

Work Experiences

PT Pertamina Trans Kontinental - **Semarang** Aug 2023 - Nov 2023

Project Leader of ARSY B MARK II

PT Pertamina Trans Kontinental is an integrated marine service company with core competencies in marine services, and logistics services. In this project we make robot, which can use for rescue man overboard.

- Conducted team leading for 5 team member with specializing in Automation Engineering to achieve three major project milestones, ensuring collaboration and technical execution align with project objectives.
- Conducted managerial aspects of the project by defining key targets and translating them into a structured timeline over a 4-month working period. This process ensured continuous refinement of strategies and optimization of workflow.
- Conducted supervising progress toward the 3 primary goals, including maintenance of the ARSY B MARK II's hull and propulsion mechanism, development of a 'Return to Home' feature to enhance location setpoint accuracy, and integration of a vision camera feature to facilitate more precise control.

Innoveam Indonesia - **Surabaya** Jul 2024 - Aug 2024

Electrical Technician of Automatic Target Shooting Robot Project

This project, owned by the Indonesian Naval Academy in collaboration with PT. Innoveam, involved my role as an outsourced professional hired by PT. Innoveam to work on the project as part of a team. In this project, we developed an autonomous robot for target placement, making it easier to replace shooting range targets.

- Conducted quality control inspections on the electrical components of 34 robots, part by part, ensuring that each component meets the required specifications for optimal performance within the project.
- Created wiring layouts and developed detailed schematics, ensuring that the electrical connections for the 34 robots are efficient, safe, and aligned with the project requirements.
- Designed and planned the electrical room layout for the robots, focusing on 3 key targets, ensuring optimal space utilization, component accessibility, and safety within the designated area.

Banyubramanta Underwater Robotics Team - **Institut Teknologi Sepuluh Nopember** Feb 2023 - Present

Head of Electrical Technician Division

Banyubramanta ITS is underwater and amphibious robotics team in Institut Teknologi Sepuluh Nopember. Which is focusing on robotics research underwater robot technology.

- Collaborated with various major fields to design and develop an autonomous underwater robot, ensuring interdisciplinary cooperation and technical integration.
- Worked closely with the Banyubramanta Underwater Robotics Team as the leader of the electrical technician division. Successfully lead 5 members from different major to shine in national robot contest.

PLCSCSL Laboratory - **Institut Teknologi Sepuluh Nopember** Dec 2022 - Present

Member Laboratory

PLCSCL (Programmable Logic Control & Supervisory Control System Laboratory) is a research lab focused on industrial controllers, specifically PLC and SCADA systems.

- Contributed to 3 projects over 3 semesters, including by application of Yolo for machine vision, embedded systems development using Microcontrollers, and a website monitoring system.
- Learned about machine vision, monitoring systems, and automation electricity by participating in industry-driven projects, collaborating with both industry factories and ITS for practical, real-world learning experiences.

Organisational Experience

Banyubramanta - **Institut Teknologi Sepuluh Nopember** Mar 2023 - Present

Head of Electrical Technician Division

Banyubramanta is a robotics research team specializing in underwater robot technology. Banyubramanta develops both autonomous robots and ROVs (Remotely Operated Vehicles) designed to carry out underwater missions and exploration tasks.

- Leading, monitoring, managing, & evaluating electrical team progress

UKM Robotika ITS - **Institut Teknologi Sepuluh Nopember** Mar 2023 - Present

Member

The Robotics Student Activity Unit is a student organization at ITS that focuses on robotics. Within the unit, there are 9 teams dedicated to research in various fields of robotics, with each team specializing in different types of robots.

- Worked as riset member team

Skills, Achievements & Other Experience

- **1st Place National Kontes Robot Bawah Air Indonesia** (2024) : First place in national stage underwater robot competition issued by PUSPRESNAS
- **Best Strategy National Kontes Robot Bawah Air Indonesia** (2024): Best Strategy in national stage underwater robot competition issued by PUSPRESNAS
- **3rd Place Regional Kontes Robot Bawah Air Indonesia** (2024) : Third place in regional stage underwater robot competition issued by PUSPRESNAS
- **1st Place Mate ROV ASEAN** (2023): First place in Mate Asean ROV competition issued by Mate ROV
- **Smart City: IoT-based Earthquake and Wind Speed Detection System with Website Integration** (2024) : The purpose of this device is to monitor environmental conditions and detect early signs of natural disasters. My responsibilities included designing the hardware. This project successfully secured 3rd place in GEMASTIK 2024.
- **SeaNaturners: Autonomous Underwater Vehicle Inspection Robot** (2024) : The project focuses on an advanced Autonomous Underwater Vehicle (AUV) designed for predictive maintenance of subsea oil and gas refinery pipelines. My responsibilities in this project include designing the PCB and providing input on the robot's 3D design.
- **Smart Farm IoT Device** (2024): This device features sensors for humidity, temperature, total dissolved solids, and water pH. The data collected from these sensors is transmitted to a website, allowing others to access it, even from remote locations. My responsibility was to complete the entire project on my own and ensure that the device is 100% user-friendly.