

Jonathan Oktaviano Frizzy

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EDUCATION

Institut Teknologi Sepuluh Nopember

2nd Year in Electrical Automation Engineering

Jul 2022 – Present

Surabaya, Indonesia

GPA: 3.55/4.00

SKILLS

Languages: C/C++, C#, Python, JavaScript, PHP, LabVIEW, MATLAB

Technologies: Flask, Streamlit, Node.js, React.js, Git, AWS, RabbitMQ, OpenCV, PyTorch, Mediapipe, TensorFlow, Arduino, ESP32, STM32, PLC Omron, PLC Mitsubishi, ROS

Methodologies: OOP, Functional Programming

EXPERIENCE

Digitalent KOMINFO

Teaching Assistant

Surabaya, Indonesia

Jan 2023 – Jun 2023, Part-time

- Working on and evaluating the code submitted by participants Junior Website Developer.
- Compiling attendance data for each session.
- Conducting tests on each participant's Final Project, and then assigning assessment points to each feature of the projects submitted by the participants

Barunastra ITS

Electrical Designer

Surabaya, Indonesia

Dec 2022 – Present, Full-time

- I am involved in the design and development of electrical architecture and battery management systems for our projects. This includes creating comprehensive electrical architectures that ensure efficient and reliable power distribution, designing custom PCB layouts for specific power and communication needs, and developing battery management systems to optimize performance and safety in [International Roboboat Competition 2023 and 2024](#).
- Developing an emergency control breaker system to enhance safety and reliability.
- Managing the placement and safety protocols of all electrical components within the robot to ensure optimal performance and compliance with safety standards.
- Designing the installation scheme of electronic hardware components for the project, comprising sensing components, actuators, and radio transmitters.

PLC and Supervisory Control System Laboratory ITS

Member

Surabaya, Indonesia

Dec 2022 – Present, Full-time

- Studying programmable logic control and automation hierarchy, with a focus on industrial automation development.

KKN Tematik Institut Teknologi Sepuluh Nopember

Leader

Surabaya–Sidoarjo, Indonesia

Aug 2023 – Oct 2023, Part-time

- Fully responsible as the project manager, overseeing the timeline, finances, and logistics in constructing the [Smart Integrated Water Quality Monitoring System project](#).
- Creating a monitoring device website using PHP to store data from all sensors of the device, accessible from anywhere.
- Designing the installation scheme of electronic hardware components for the project, comprising sensing components, actuators, and radio transmitters.

Wirausaha Merdeka ITS

Electronics Engineer

Surabaya, Indonesia

June 2023 – Oct 2023, Part-time

- I designed and developed the electrical system for the "Beginner Kit Electronics" product using Autodesk Fusion 360 for the design and Proteus for circuit simulation. Additionally, I participated in business management training to meet specific business criteria and fulfill the requirements for the Free Entrepreneurship activity evaluation. [Here is the documentation](#).

Bioinformatics Study Club ITS

Surabaya, Indonesia

Vice Chairman

June 2023 – May 2024, Part-time

- As the Vice Chairman of the Bioinformatics Study Club, my responsibilities include Assisting the Chairman in overseeing club activities, ensuring smooth operation, and providing guidance to club members. Managing and coordinating research projects, workshops, and events to promote knowledge and skills in bioinformatics. [Here is the instagram account.](#)

Naval Military Academy

Surabaya, Indonesia

Electrical Engineer

Jul 2024 – Aug 2024, Full-time

- I work here as an electrical technician for target shooting robots at the Naval Military Academy shooting range. My responsibilities include creating electrical schematics, wiring, troubleshooting, and controlling each robot component using microcontrollers.

AWARDS & ACHIEVEMENTS

Autonomy Challenge at International Roboboat Competition Secured 3rd place by integrating and coordinating all electronic components in 'Nala Proteus V.2,' including PCB, sensors, and actuators. Developed electrical and communication architecture, implemented with a success rate of 90 percent (Feb 2024)

Autonomy Challenge at International Roboboat Competition 1st place, Working on and combining all electronic devices in "Nala Proteus" such as PCB and others. Designing electrical architecture and battery management. (Mar 2023)

Autonomous Tourism Surface Vehicle Prototype Contest, Kontes Kapal Cepat Tak Berawak (KKCTBN) Secured the 1st place by Took part in helping on developing electrical systems for Barunastra ITS' "Nala Athena" Autonomous Tourism Surface Vehicle Prototype Ship. (Oct 2023)

LKS Nasional Mobile Robotic Secured the 3rd place by creating a robot utilizing a National Instruments controller, MyRIO, integrated with actuators such as servos and PG motors, and featuring a camera for barcode, color, and obstacle detection, serving as a hospital service robot (Oct 2022)

SMK Sore Tulungagung Award: Graduated as the highest ranked student. (Jun 2022)

PROJECTS

Smart Integrated Water Quality Monitoring System | [Article](#)

- This project was part of my Community Empowerment Program (KKN), with a focus on thematic environmental issues. The primary goal was to monitor the water quality of ponds by measuring key parameters such as temperature, pH, and oxygen levels. To facilitate the analysis and sharing of this data, I also developed a website to store and display all the collected information. This project aimed to provide valuable insights into the environmental health of local water bodies and support efforts in maintaining and improving water quality.

CCTV Thermal HVAC | [GitHub](#)

- In this project, I integrated an environmental thermal detection system using Thermal CCTV with an HVAC cooling system to enhance energy efficiency. The system automatically cools the room based on temperature readings from the Thermal CCTV. Additionally, I created a universal remote to control the HVAC system. I used Python and C for programming and developed a monitoring website. Key technologies included YOLO for object detection and Flask for web development.

Oil Navigating Ship | [LinkedIn](#)

- In this project, I assumed the dual role of an electrical and mechanical conceptualizer and consultant. My duties encompassed the design of electrical and communication diagrams for the ship, ensuring comprehensive and efficient systems integration. Additionally, I provided valuable recommendations for implementing ship maneuvers, contributing to the overall functionality and safety of the vessel. My multifaceted involvement underscores my expertise in both electrical and mechanical engineering disciplines, as well as my capacity to offer strategic insights across various aspects of maritime engineering projects.

CERTIFICATES

Project Manager by Google

Mar 2024

Foundation Project Management [Certificate](#).

Artificial Intelligence for Business by NASBA

Mar 2024

Introduction to Artificial Intelligence [Certificate](#).

Front-end Website Developer by Dicoding Indonesia

Mar 2024

The front-end website utilized Bootstrap and JavaScript for enhanced interactivity. [Certificate](#).

ORGANIZATIONS

UKM Robotika ITS

Member

Oct 2022 – Present

Barunastra ITS

Staff Electrical Division

Dec 2022 – Present

Bioinformatics Study Club ITS

Vice Chairman

May 2024 – Present