



Jonathan Oktaviano Frizzy

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🌐 jonathan oktaviano frizzy | 🐙 GitHub | 📁 Portfolio | 📍 Surabaya, Indonesia

EDUCATION

Institut Teknologi Sepuluh Nopember
3rd Year in D4 Automation Electronic Engineering
Jul 2022 – Present

Surabaya, Indonesia
GPA: 3.55/4.00

EXPERIENCE

PLC and Supervisory Control System Laboratory ITS

Surabaya, Indonesia

Member

Dec 2022 – Present, Full-time

- Contributed to 3 key projects over 3 semesters, including the application of Yolo for machine vision, embedded systems development using STM32, and a website monitoring system.
- Co-authored academic papers and contributed to intellectual property rights filings for automation systems.
- Focused on industrial automation development, machine vision, automation electricity, and project-based learning with industry collaboration.

Digital Talent Scholarship KOMINFO

Surabaya, Indonesia

Teaching Assistant

Jan 2023 – Jun 2023, Part-time

- Supported 100 participants in the Junior Website Developer program, guiding them through coding exercises and project development.
- Managed attendance data for each session and facilitated learning outcomes for participants.
- Evaluated 30 final projects, providing feedback and assigning assessment points for feature implementations.

PT. Pertamina Trans Kontinental

Cilacap, Indonesia

Electrical Engineer

Jun 2023 – Dec 2023, Full-time

- Designed and developed energy-efficient electrical systems, leading to a 30% improvement in energy savings for oil navigation vessels through the adoption of optimized battery systems.
- Led a team of 5 engineers in the integration of communication tools and power management solutions to ensure seamless operation on board vessels.

PT Innoveam

Surabaya, Indonesia

Electrical Engineer

Jul 2024 – Aug 2024, Full-time

- Worked on the electrical systems for 34 target-shooting robots used in the Naval Military Academy shooting range.
- Responsibilities included designing electrical schematics, wiring, troubleshooting, and controlling robot components using microcontrollers.

KKN Tematik Institut Teknologi Sepuluh Nopember

Surabaya–Sidoarjo, Indonesia

Project Leader

Aug 2023 – Oct 2023, Part-time

- Led a team of 6 members in the Smart Integrated Water Quality Monitoring System project, responsible for timeline, finances, and logistics.
- Developed a monitoring device using 5 sensors with a 90% accuracy rate, capable of maneuvering across various water bodies.
- Designed the installation scheme for sensing components, actuators, and radio transmitters, with data accessible from anywhere via a web interface.

Barunastra ITS

Surabaya, Indonesia

Electrical Designer

Dec 2022 – Present, Full-time

- Developed an emergency control breaker system using two parameters (Signal and Power), remotely controlled via radio frequency for enhanced safety.
- Managed over 50 types of components and more than 200 individual parts to optimize electrical performance and compliance with safety standards.

- Designed and implemented power electronics circuits, analog systems, and embedded systems based on STM32 for various autonomous vehicle projects.

Bioinformatics Study Club ITS

Surabaya, Indonesia

Vice Chairman

June 2023 – Present, Part-time

- Assisted the Chairman in overseeing club operations, organizing research projects, workshops, and events.
- Leading a core team of 20 members and overseeing over 30 members in total, ensuring smooth operations and successful execution of research projects, workshops, and events.

AWARDS & ACHIEVEMENTS

Autonomy Challenge at International Roboboat Competition: - 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% (Feb 2024) | [Paper](#).

Autonomy Challenge at International Roboboat Competition: - 1st place, Led the development of the electrical architecture and battery management for 'Nala Proteus,' ensuring seamless integration of PCB and sensor systems. (Mar 2023) | [Paper](#).

Autonomous Tourism Surface Vehicle Prototype Contest, (KKCTBN): - 1st place Contributed to the electrical design of 'Nala Athena' Autonomous Tourism Surface Vehicle, securing top placement. (Oct 2023)

LKS Nasional Mobile Robotic: - 3rd place Developed a service robot using MyRIO and National Instruments controller, with integrated sensors for navigation and obstacle detection. (Oct 2022)

PROJECTS

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

- Led the design and implementation of a monitoring system for water quality in ponds, utilizing five sensors to measure key parameters such as temperature, pH, and oxygen levels. The system achieved a 90% accuracy rate and could maneuver in all directions to collect data across different locations.
- Developed a web platform to store and display collected data, providing valuable insights into environmental health and supporting ongoing efforts in water quality management.

PT. Pertamina Trans Kontinental "Oil Navigating Ship" | [LinkedIn Experience](#)

- Acted as the electrical and mechanical consultant, responsible for designing both communication and electrical diagrams for oil navigation vessels. Spearheaded strategic recommendations on system integration, leading to a 30% energy efficiency improvement through optimized battery management and ship maneuvering processes.

SKILLS

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

Technologies: Flask, Streamlit, Node.js, React.js, Git, RabbitMQ, OpenCV, PyTorch, Mediapipe, TensorFlow, Arduino, ESP32, ESP8266, STM32, PLC Omron, PLC Mitsubishi, ROS2, KiCAD, Fusion360 CAD, Altium Designer

Methodologies: OOP, Functional Programming, Kinematics, PID, Neural Network, CNN

CERTIFICATES

Project Manager by Google

Mar 2024

Foundation Project Management [Certificate](#).

Artificial Intelligence for Business by NASBA

Mar 2024

Introduction to Artificial Intelligence [Certificate](#).

CS50's Introduction to Artificial Intelligence with Python

Aug 2024

Artificial Intelligence (AI) and Python (Programming Language) by Harvard University. [Certificate](#).

ORGANIZATIONS

Barunastra ITS

Dec 2022 – Present

Expert Staff Electrical Division

Bioinformatics Study Club ITS

May 2024 – Present

Vice Chairman