Jonathan Oktaviano Frizzy

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EDUCATION

Institut Teknologi Sepuluh Nopember <div align="right">Surabaya, Indonesia</div>

2nd Year in Electrical Automation Engineering <div align="right">*GPA: 3.49/4.00*</div>

Jul 2022 – Present

SKILLS

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

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

Methodologies: OOP, Functional Programming

EXPERIENCE

Chico Service Electronic <div align="right">Tulungagung, Indonesia</div>

Electronic Engineer <div align="right">*July 2021 – Dec 2021, Full-time*</div>

- Designing a PCB for a DIY audio driver assembly using Autodesk Fusion 360/Eagle software, employing manual printing, followed by conducting test trials on the audio driver.
- Designing a custom Power Supply and Amplifier box utilizing an external audio driver, custom 10A power supply, and polarity protection circuitry.
- Designing a mini power supply or mini adapter complete with a casing box.
- Performing troubleshooting and repairs on electronic devices such as Television, electric fans, power outlets, sound mixer, and remote controls.

SMAN 1 Durenan <div align="right">Trenggalek, Indonesia</div>

Teaching Assistant <div align="right">*Jan 2022 – Feb 2022, Part-time*</div>

- Delivering instruction on the fundamentals of electrical circuits theory based on the laws of physics, followed by hands-on guidance in assembling basic electrical circuits such as series and parallel, alongside introducing various DC and AC electronic components.
- Instructing foundational algorithms and programming principles using the C language, subsequently applied to microcontrollers for creating simple projects employing components like LEDs, HC-SR04 sensors, and others.
- Providing instruction on constructing both analog and microcontroller-based line tracer robots, offering practical exercises and operational guidance

Digitalent KOMINFO <div align="right">Surabaya, Indonesia</div>

Teaching Assistant <div align="right">*Jan 2023 – Jun 2023, Part-time*</div>

- 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

KKN Tematik Institut Teknologi Sepuluh Nopember <div align="right">Surabaya–Sidoarjo, Indonesia</div>

Leader <div align="right">*Aug 2023 – Oct 2023, Part-time*</div>

- 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.

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 managament. (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

Tic Tac Toe | *GitHub*
- Designing a tic-tac-toe game with a criterion that the bot never loses, and allowing for gameplay between two players. This time, I created it using the C language.

CV Webiste | *GitHub*
- For this project, I created a portfolio website using semantic HTML, CSS, and JS for branding purposes.

STM32 Training Kit | *GitHub*
- I engineered this microcontroller employing the STM32F103C8T6 IC with a tailored design, leveraging KiCAD software to craft the STM32 Training Kit for Barunastra ITS.

ESP32 Electric Vehicle | *GitHub*
- Here I developed a custom PCB for an ESP32 microcontroller equipped with an embedded CAN bus module. This project was tailored for electric vehicle monitoring purposes.

Smart Integrated Water Quality Monitoring System | *GitHub*
- This project was part of my Community Empowerment Program (KKN) focusing on thematic environmental issues. It entailed monitoring the water quality of ponds, including temperature, pH, and oxygen levels, and developing a website to store all the collected data.

Thermal CCTV HVAC | *GitHub*
- In this project, I integrated two systems: an environmental thermal detection system using Thermal CCTV and an HVAC cooling system. The aim of combining these two systems is energy efficiency, achieved through automatic room cooling based on temperature readings from the Thermal CCTV. The programming languages utilized in this project include Python, C, and a website for monitoring, along with various technologies such as YOLO, Flask, and others.

Oil Navigating Ship | *LinkedIn*
- In this project, I served as both an electrical and mechanical conceptor and consultant. My responsibilities included designing electrical and communication diagrams for the ship and providing recommendations for the implementation of ship maneuvers.

Certificates

Project Manager by Google *Mar 2024*
Foundation Project Management Certificate.

Artificial Intelligence for Business by NASBA *Mar 2024*
Introduction to Artificial Intelligence Certificate.

Organizations

Barunastra ITS *Dec 2022 – Present*
Staff Electrical Division