



MUHAMMAD HUSAINI ZUHDI

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Lamongan, East Java

I am a graduate of Electrical Automation Engineering from Institut Teknologi Sepuluh Nopember with a GPA of 3.62. My primary focus is on the Internet of Things (IoT), where I integrate embedded systems with intelligent software to build automated, data-driven solutions. With both industrial internships and professional experience, I have contributed to end-to-end IoT projects ranging from sensor integration and data acquisition to cloud connectivity and intelligent automation. I am passionate about using Python to develop machine learning models that enhance IoT systems through predictive analytics, anomaly detection, and smart control. My hands-on experience includes data preprocessing, algorithm development, and deploying models in real-time environments. Motivated by curiosity and a problem-solving mindset, I aim to create impactful IoT solutions powered by AI that improve efficiency, decision-making, and user experience.

Work Experiences

Freelance

Jan 2025 - Present

Freelancer Engineering

- Designed and developed an automatic sugar weighing system using Arduino Nano and load cell sensor for precision measurement and control.
- Developed a student attendance system using ESP8266 and RFID, integrated with a MySQL database and backend server.
- Implemented the MQTT protocol for real-time data transmission between IoT devices and server infrastructure.
- Developed RESTful APIs with FastAPI and middleware to handle seamless data flow from edge devices to server endpoints.

PT Imani Prima - Jakarta

Dec 2023 - Present

Electronic Data Analyst

- Support to client location for pre-installation of product
- Support engineer team in product installation at client
- Support sales and marketing team for product data trend analysis
- Process data in server database for trend analysis
- Monitoring product data in real time on IoT devices
- Providing business recommendations for data trends
- Develop software for team analysis needs
- Building machine learning models for data prediction and classification according to business flow
- Discussion with firmware and hardware divisions to solve problems

PT Parametrik Solusi Integrasi - Bandung, West Java

Sep 2021 - Aug 2023

Internship - IoT and Digitalization Division - Reseach & Development

- Design and Implemented Internet of Things on Renewable Energy Microhydro for implemented in Kemuning village, Karanganyar
- Mobile apps development for data acquisition sensor from get API data logger (Raspberry pi) using flutter framework for implemented in Kemuning village, Karanganyar
- Development Smart Farming Greenhouse on Hydroponic Plants in Greenhouse Bandung
- ITS Final Project for Prototyping Industrial Internet of Things (IIoT) in Heavy Equipment and Fabrication in PT Parametrik Solusi Integrasi
- Software development as a gateway for sending data via the MQTT protocol using C++ and Qt Creator framework for implemented in PT Parametrik Solusi Integrasi
- Mobile apps development for QC Control process in electrical panel using flutter framework for implemented in PT EGA Tekelindo Prima
- Application Development of a web application for a job search platform at the Swedish company kemizares

PT ITS Tekno Sains - Surabaya, East Java

Sep 2020 - Aug 2021

Student Researcher - Reseach & Development Division

- Research and Development IoT of OEE Systems using PLC Siemens for Digitalization in Industrial Manufacturing - PT Universal Tekno Reksajaya, Balikpapan
- Electrical Wiring Network Configuration and Web Based Programming Dashboard Monitoring for OEE System
- Analyze production data for reports to clients

PT IIMAE - Surabaya, East Java

Aug 2019 - Aug 2020

Student Researcher - Research & Development Division

- Web Based Dashboard Monitoring Renewable Energy PLTS On Grid
- PLC programming for automatic galvalum cutting tool using PLC Misubishi

- Trainer Robotic and Electrical Automation for SMK Students

Education Level

Institut Teknologi Sepuluh Nopember - Surabaya, East Java

Aug 2019 - Sep 2023

Bachelor Electrical Automation Engineering, 3.62/4.00

- Final Project : Design and Implementation of Total Productive Maintenance to Measure Production Effectiveness in Lathe Machine Using Overall Resource Effectiveness Method

Organizational Experience

Student Reseach Laboratory (Cyber Physical Robotic Industrial and Automation Laboratory)

Jan 2021 - Aug 2021

Coordinator

- Engage in engineering product research and development from development to implementation such as IoT, software development and electrical
- Collaborating with vocational schools for training on industrial automation

Skills, Achievements & Other Experience

- **Hard Skills:** Microcontroller, Embedded System, Internet of Things, Python, Numpy, Pandas, Matplotlib, Machine Learning, Deep Learning, Computer Vision, PHP, C, MySQL, PostgreSQL, Microsoft Office
- **Soft Skills:** Curiosity, Good Teamwork, Fast Learner, Good Communication, Good Analytics, Ambitious, Good Problem Solving
- **Achievements** (2023): 2 years industrial internship award certificate
- **Projects** (2021): Appreciation for the success of working on the OEE System Industrial digitalization project in Balikpapan
- **Achievements** (2020): Commite Indonesian Robotic Olimpiade, Robokids
- **Webinars Attended** (2021): AI Innovation Summit Convergence
- **Achievements** (2021): Intro to Data Analyst