Ahmad Syarifudin

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OBJECTIVE

Results-oriented and highly motivated Physics fresh graduate with hands-on experience in Industrial Internet of Things (IIoT) engineering and robotic research. Seeking a challenging engineering position in the intersection of technology and business position where I can utilize my skills in robotic, control systems design, and IIoT development to contribute to the success of an innovative organization. Eager to leverage my expertise in smart factory systems, sensor technologies, and project management to drive innovation and achieve mutual growth.

EDUCATION

University of Indonesia | Depok, Indonesia
Bachelor in Physics (2019-2024)
GPA: 3.36 (transcript)
Relevant Courses: Statistical Methods, Statistical Physics, Linear Algebra, Classical Mechanics, Quantum Mechanics, Electronics, Computer-Based Data Acquisition, Embedded Systems, Control Systems, Sensors and Actuators, Physical instrumentation
Relevant Project: Smart Factory System and IIoT Development in PT Kalbe Farma,Tbk**,** Advance Power Monitoring System with Schnider PM 5560, Designing a System Program for AVR Microcontrollers That Can Used to Regulate The Work of a Process Unit (Assembly, Proteus), Smart Irrigation Based on Weight Sensor Load Cell HX711 ADC and Soil Moisture (C, Arduino, Proteus) (link)

ACADEMIC RESEARCH EXPERIENCE

Automatic Robotic Research Group, University of Indonesia, Depok, Jawa Barat, Indonesia
Robotic Researcher(February 2023 - December 2023)
- Worked on a robotics project to create a quadcopter system that can avoid obstacles and detect human body parts autonomously.
- Designing a quadcopter using a pixhawk as the flight controller and a raspberry pi4 as a single board computer.
- Calibrating sensors and actuators on a quadcopter with Qgroundcontrol.
- Configure communication between Raspberry pi4 and laptop using ROS master and client.
- Train and evaluate the YOLOv8 model for human body part detection resulting in a mAP of 95% and then deploy it into a quadcopter.
- Implementing ORB-SLAM3 and OctoMap Algorithm to detect obstacle and mapping unknown environment.
- Make an inventory list of all components contained in the lab for supporting efficiency, safety, and sustainability of research.

PROFESSIONAL EXPERIENCE

PT Sariguna Primatirta,Tbk, Surabaya, Jawa Timur, Indonesia
Internet of Things Developer(April 2024 - Juli 2024)
- First IoT developer in the company to create a sustainable IoT system for all plants.
- Having direct discussions with the IT director and manager to procure equipment in support of implementing the IoT system.
- Communicating with vendors regarding the IoT system on PET preform machines to perform data acquisition.
- Performing Overall Equipment Effectiveness (OEE) analysis on the machines to achieve the targets set by the user.
- Installing and acquiring data from temperature and humidity sensors in multiple rooms with the aim of recording data for audit purposes.

- Creating a dashboard for real-time monitoring using ThingsBoard.

PT Kalbe Farma,Tbk, Cikarang Selatan, Jawa Barat, Indonesia
Industrial Internet of Things Engineer(August 2022- December 2022)
- Part of the Kampus Merdeka internship program organized by the Indonesia Ministry of education, culture, research, and technology.
- Worked on IIoT project in PT Kalbe Farma to implement Smart Factory System and IIoT Development.
- Advance Power Monitoring System with Schnider PM 5560 to reduce maintenance costs and energy consumption.
- Ladder Programming for PLC Siemens(TIA Portal 16), Mitsubishi(GXWorks 2&3), Omron(Cx Programmer).
- Designing and programming monitoring and control system using Human Machine Interface(EasyBuilder Pro, cMT Viewer).
- Setup on premises server by implementing hypervisor technology. Run server using Linux OS and managing services using Docker Containerization
- Data logging of various machine parameters using Node-red Implement real-time monitoring system using Grafana.
- Network Infrastructure, infrastructure commissioning, network routing, and firewall. Assembled server rack and rack which consisted of various type of Mikrotik's switches and routers and configure it by Winbox.

ORGANIZATION & VOLUNTEERING
PSAF FMIPA UI
Deputy of Evaluation Division (June 2021- August 2021)
- Train 12 evaluation division staff to evaluate PSAF FMIPA UI evaluate assignments, discipline, and applied values from 900+ new students in FMIPA UI.
- Make the Election of Chair and Coordinator of the 2021 FMIPA UI Student Coordinator determined from the joint election then analyze the error data from the election.
Staff of Student Movement (June 2020 – August 2020)
- Make scripts and give speeches in front of 900++ FMIPA 2020 students to find out the values and goals of PSAF FMIPA UI.
BEM FMIPA UI
Staff of the Department of Strategic Studies and Action (Feb 2020-Feb 2021)
- Make scientific article every month about the environment, especially about air pollution in Indonesia.
- Analysis of air quality index in Jakarta from the central agency for statistics and environmental laboratories in the DKI Jakarta area.
- Collaborating with the UI-wide BEM alliance to produce academic literature on the study of air pollution issues.
BRIGADE UI
Researcher (Augustus 2019 - Desember 2019)
- Participate in writing training on studies, actions and movement.
- contributed to writing the final project study of the 2019 BRIGADE class on "Quo Vadis Pemberantasan Korupsi di Indonesia".

CERTIFICATE

Introduction to Data Analytics (Simplilearn), Data Science with Python (EDUCBA),Belajar Dasar Visualisasi Data (Dicoding) , Problem Solving Basic(HackerRank)

SKILLS

MATLAB, Assembly, Ladder, Robotic Operating System(ROS), Node-Red, Linux, Docker, Proxmox, PLC,HMI, Mikrotik, C, Python, JavaScript, R, PostgreSQL, TimescaleDB, Thingsboard.