DZULFIKAR FAKHRI AZMI
Electrical Engineering Fresh Graduate

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PROFILE

A Fresh Graduate of Electrical Engineering from Sepuluh Nopember Institute of Technology who graduated with cumlaude predicate. A hard working and highly motivated person, enjoy working in a diverse environment, always willing to learn, and looking forward for the new challenge. As a student, I have involved in some successful research project such as virtual power plant, electric bike, and merah putih tablet. I've been active in microelectronics laboratory, student, and professional organizations. Experienced in some successful industrial related to electrical, electronic, and software engineering. As an early career, I have a great impact for my team in my working environment. I quickly fit in with the working environment and always willing to develop more. Have a desire to learn new things, especially those related to industrial electronics, Supervisory Control and Data Acquisition (SCADA), Internet of Things (IoT), embedded system, Artificial Intelligence, robotics, power electronics, and other technologies. Also has knowledge about website development, mobile technology, digital and analog electronic systems, semiconductor devices and integrated circuits (IC), Programmable Logic Devices (PLD), and other knowledge about electrical and electronics.

EXPERIENCES

PT INFOGLOBAL TEKNOLOGI SEMESTA – Surabaya, Indonesia
Research Engineer   *(July 2023 – now)*
- Research and develop IMU sensor and OpenGL software for aircraft Helmet Mounted Display System (HMDS)
- Research and develop aviation electronics (avionics) communication databus using MIL-STD-1553.
- Research and develop interface of aircraft INS-GNSS System (Inertial Navigation System and Global Navigation Satellite System).
- Research, implement, and deploy an IoT device project to digitize a government administration processes.
- Research and develop IoT device using some communication protocol (web socket, HTTP, Bluetooth Low Energy, etc) for product development.
- Research FPGA using Zynq ZCU104 and Pynq for the applications of video processing and hardware peripherals.

PT ITS TEKNO SAINS – Surabaya, Indonesia
Hardware Engineer Intern   *(February 2022 – July 2022)*
- Studying electronics industrial ecosystem, laptop manufacturing process, and business process of electronics company.
- Preparing system for software and learning module injection to the tablet during manufacturing process.
- Analyzing power supply module for laptop using reverse engineering methodology.
- Analyzing laptop motherboard block diagram, chip that used in the motherboard, and wiring connection.

SEPULUH NOPEMBER INSTITUTE OF TECHNOLOGY – Surabaya, Indonesia
Research Assistant   *(October 2022 – January 2023)*
- Research in monitoring solar power plant grid connection using SCADA, modbus TCP/IP protocol, and OPC Unified Architecture.
- Research in integrating solar power plant with Internet of Things Server using various communication protocol.
- Implementing and deploying data acquisition system for industrial power meter using modbus RTU protocol.
- Implementing and deploying an electrical load monitoring system using LoRaWAN and MQTT communication protocol.

PT TELKOM INDONESIA – Bandung, Indonesia
IoT Engineer Intern   *(January 2022 – March 2022)*
- Studying the use of IoT technology in industry (manufacturing, troubleshooting, and business models).
- Develop a power meter data acquisition system and an electrical load monitoring system based on IoT.
- Research in sending electrical load data from the power meter to the IoT platform using ESP32 Long Range (LoRa) and ESP32 WiFi technology.

● Research in sending electrical load data from the power meter to the IoT platform using HTTP and MQTT protocol.

IEEE ITS Student Branch – Surabaya, Indonesia
Educational Development Staff   (March 2021 - December 2021)
● Studying, preparing, and making guidebooks regarding competitions held by IEEE both regionally and internationally.
● Conduct basic python and machine learning training for student from the faculty of electrical and informatics engineering.
● Prepare and create a website for the profile of the IEEE ITS Student Branch organization.

EDUCATION

INSTITUT TEKNOLOGI SEPULUH NOPEMBER – Surabaya, East Java
Bachelor of Electrical Engineering   *(2019 – 2023)*
● GPA: 3.74/4.0
● Thesis: *Design And Prototype Of Irrigation Water Demand Mapping System In Real Time Based On K-Means Clustering Method*
● Basic Undergraduate Coursework: Calculus, Physics, Basic Programming, Linear Algebra and Discrete Structures, Probability, Statistics, and Stochastic Processes, Numerical Methods, Electronic Circuit, Analog Circuit, Partial and Ordinary Differential Equations, Digital Signal Processing
● Electronics Coursework: Semiconductor Device and Integrated Circuit, Embedded System, Sensor and Actuator, Design of Analog Electronics System, Design Using Programmable Logic Device, Electronic Control System, Electronic Instrumentation, Machine Vision, Data Acquisition and Signal Processing, Industrial Electronics and Robotics, Basic Intelligent Electronic System
● Enrichment Coursework: Mobile Technology

SKILLS

● Languages: Indonesia, Inggris
● *Internet of Things (IoT)*
● *Embedded System*
● *Microprocessor, microcontroller, and Digital System*
● *Programming (C, C++, Python, JAVA)*
● *SCADA*
● *Electrical Software Simulation (Proteus, Multisim, LTSpice, MATLAB)*
● *Electrical Circuit Design (Eagle)*
● *Linux*
● *Image Processing (OpenCV)*
● *Machine Learning (Tensorflow, Keras, Pytorch)*
● *Web Development (HTML, CSS, Javascript, PHP, Laravel)*
● *Communication*
● *Teamwork*
● *Problem Solving*
● *Analytical Thinking*

TRAINING AND CERTIFICATION

● *Test of English as a Foreign Language – Institutional Testing Program (TOEFL ITP)*
Score: 510
● *Information Technology Fundamentals by IBM SkillsBuild*
● *Semiconductor Literacy Program by INTEL*
● *Introduction to Python by DataCamp*
● *Intermediate Python by DataCamp*
● *Belajar Dasar Visualisasi Data by Dicoding Academy*
● *Belajar Machine Learning Untuk Pemula by Dicoding Academy*
● *Belajar Pengembangan Machine Learning by Dicoding Academy*
● *Belajar Dasar Pemrograman Web by Dicoding Academy*