

HAFIZ RIFKI

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I am a Computer Engineering student at the Indonesian Education University with a strong focus on Internet of Things (IoT) systems, embedded technology, and intelligent system development. I have experience in designing and implementing integrated hardware–software solutions, including microcontroller-based systems and real-time data communication architectures. My current project work involves in marine system integration, sensor implementation, and developing user-oriented interfaces to support effective device interaction and monitoring. I am proficient in Microsoft Word, Excel, and PowerPoint, and I have a strong interest in artificial intelligence, IoT innovation, and emerging technologies in marine industry. I adapt quickly to new environments and am committed to continuous learning and technological advancement.

EDUCATION

UNIVERSITAS PENDIDIKAN INDONESIA | August 2022 – Prospected graduate in May 2026

Graduate in Computer Engineering – GPA 3.85/4.00

EXPERIENCE

PT. Irostech Solusi Inteligen – Iroschool STEM Project | February 2025 – July 2025

Project Manager of Iroschool STEM Project

- Lead the development of an interactive Blockly-based learning platform to help children and teenagers learn programming using the ESP32 microcontroller.
- Designed an intuitive user interface (UI) to ensure ease of use and accessibility for beginners.
- Integrated the Blockly system with ESP32 hardware to create an interactive programming experience.
- Developed interactive tutorials to help users understand basic programming concepts and hardware control visually.
- Collaborated with the team to ensure all features were functional and accessible to beginner users while introducing coding and IoT concepts to the younger generation.

Badan Riset dan Inovasi Nasional – Research Internship | August 2025 – January 2026

Research Assistant

- Contributed to the research project on IoT-based Ship Emission Remote Monitoring System development.
- Integrated hardware components and embedded systems with software platforms to ensure seamless data acquisition and transmission.
- Developed and configured MQTT-based communication systems to enable real-time emission data monitoring.
- Assisted in system architecture design, including sensor integration and data processing workflows.
- Participated in system testing and validation phases to evaluate performance, reliability, and data accuracy under operational scenarios.

Student Association in Computer Engineering – Universitas Pendidikan Indonesia | January 2024 – January 2025

Staff of supervisory committee Legislative Parliament

- Supervise and assess the treasury department's financial activities and procedures.
- Ensure that all financial transactions are conducted in accordance with organizational policies and regulations.
- Review and evaluate the accuracy and integrity of financial reports and records.
- Monitor the management of financial resources, including budgeting and cash flow.

- Provide recommendations for improving financial management practices and ensuring fiscal accountability.
- Report any discrepancies or irregularities in financial operations to the relevant authorities.

Student Association in Computer Engineering – Universitas Pendidikan Indonesia | Januari 2023 – January 2024

Staff of Commission 2 of Legislative Parliament

- Supervise and guide the Advocacy Department (Advokesma) in handling new student admissions.
- Ensure that scholarship programs and tuition fee (UKT) matters are administered smoothly and equitably.
- Collaborate with university authorities to address student concerns related to academic financial matters.
- Ensure that students are informed and supported in accessing available financial assistance opportunities.
- Provide leadership and direction to ensure the department's efficiency and effectiveness in fulfilling its objectives.

SERTIFICATION

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|-----------------------------------|------------------------------|
| • Google UX Design | • Google IT Support |
| • Front End Development Libraries | • Google Data Analytic |
| • Google Cybersecurity | • Google Project Management. |
| • Responsive Web Design | • Google AI Essentials |

PROJECTS

- IoT-Based Chicken Coop Monitoring System Using ESP32 Integrated with Website and Android Flutter App with Firebase
- Water sensing system utilizing an NTC100K temperature sensor.
- Self-Balancing Robot Using Atmega328P Microcontroller, MPU-6050 Sensor, and N20 Micro Gear Motor

LANGUAGES AND SKILLS

- Bahasa Indonesia (Native), English (Basic).
- Ms. Excel (Excel Skills for Basic Statistics).
- Front End Web Development (Bootstrap, HTML, CSS).
- Basic Programming (C++, Java, Dart).
- Back End Development (JavaScript, Flask).
- UI/UX Design (Figma).
- Basic Data Analyst (NumPy, Pandas, MySQL, Matlab).

HARDWARE AND TECHNOLOGY SKILLS

- Microcontroller Development (ESP32, ATmega328P).
- IoT System Integration (Sensor Integration, Real-Time Data Communication, MQTT).
- Embedded Systems Development and Hardware–Software Integration.
- Interactive Learning Platform Development (Blockly-Based Systems).
- Sensor Implementation and Hardware Control Systems.

INTELLECTUAL PROPERTIES

- **Copyright** – *Integrated IoT Firmware for Real-Time Multi-Sensor Ship Exhaust Emission Monitoring* (Reg. No. 001046812, 2025)
- **Patent Application** – *IoT-Based Multi-Gas Sensor Ship Emission Monitoring System with Ming Stack* (App. No. P00202512627, 2025)