Denis Wahyu Rizqullah

Computer Engineering graduate with hands-on experience in embedded systems, machine learning, web-based systems, and hardware–software integration. Completed a software and hardware development internship at Telkomsel, developing an antenna control prototype from research to implementation. Strong in C/C++, Python, web development, system design, and technical documentation.

Relevant Experience

Software and Hardware Developer Intern, Telkomsel

Feb - June 2024

- Designed and developed a prototype of a horizontal antenna tilt mechanism to improve signal distribution efficiency.
- Involved in end-to-end development including research, hardware integration, control system development, and assembly.
- Documented design process, technical specifications, and performance results for future development reference.

Educational Background

Bachelor's Degree in Computer Engineering

Brawijaya University, Malang, Indonesia
Aug 2021 - Jun 2025 | GPA: 3.80/4.00

- Relevant coursework: Embedded Systems, Computer Networks, Artificial Intelligence, Machine Learning, Database Systems, Software Engineering.

Project

Horizontal Antenna Tilt

- Designed and developed a prototype system to adjust antenna tilt angle horizontally up to 45° for optimized signal coverage.
- Integrated DC motor with gear system as actuator and implemented ESP8266-based control system for precise angle adjustment.
- Enabled wireless access and control via ESP8266 Wi-Fi, integrated with a lightweight embedded web server for browser-based antenna tilt control.

Red Blood Cell Detection using Mobile Phone and Template Matching

- Developed a mobile-based image classification system using Convolutional Neural Networks (CNN) with TensorFlow to classify four types of white blood cells from microscope images.
- Applied template matching algorithm with OpenCV to identify and count red blood cells automatically.
- Evaluated system performance with real microscope samples, achieving reliable detection compared to manual observation.

Weather Prediction System for Smart Plantation Irrigation

- Developed a weather prediction system using Artificial Neural Networks (ANN) deployed on a Raspberry Pi to support automated irrigation decisions in smart plantation environments.
- Integrated environmental sensors (temperature, humidity, soil moisture) with Raspberry Pi for real-time data acquisition and model evaluation.
- Designed a workflow that analyzes both current environmental conditions and forecast results to minimize unnecessary water consumption and improve plantation efficiency.

Contact

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Skills

Technical Skills

- IoT & Embedded Systems
- Web Development
- Machine Learning
- Image Processing & Computer Vision
- Software Engineering & System Design

Tools & Technologies

- Programming Languages: C/C++, Python, PHP
- Databases: MySQL
- Version Control: Git, GitHub
- IDEs & Platforms: Arduino IDE, VS Code

Languages

- Indonesia (Native)
- English (Intermediate)

Certification

- Python Developer, Sololearn
- Microsoft Office Desktop Application by Trust Training Partners