

# LUCKY DANI SAPUTRA

## Internet of Things & Information Technology Student

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Information Technology student passionate about connecting hardware and software. Skilled in C++ for embedded systems (Arduino, ESP32) and modern front-end development with React. Eager to contribute to innovative IoT projects in an entry-level role by applying hands-on development skills.

### SKILLS

**Tools & Database:** Git, GitHub, Docker, VS Code, Arduino IDE, Wokwi, PlatformIO, Mysql, Firebase

**Web and Software Development:** C++, Python, JavaScript, SQL, HTML/CSS, PHP, React.js, Flask, Bootstrap

**IoT & Embedded Systems:** Microcontroller Programming (Arduino/ESP32), Sensor Integration, Motor Control, MQTT

### WORK EXPERIENCE

#### IoT Bootcamp Project

Apr 2025 - May 2025

PT. Mattel Indonesia

Jababeka, Bekasi Regency

**Tech stack:** ESP32 (C++/Arduino), MQTT (Paho, PubSubClient), Python, Firebase, Several Sensors, HTML, CSS, JavaScript

#### "IoT-Enabled Machine Connectivity with Secure MQTT Protocol"

- Developed an IoT monitoring system integrating ESP32 microcontrollers with multiple sensors (fire, water, motion, vibration, temperature) and real-time MQTT communication.
- Built a cloud backend using Firebase Realtime Database for data storage, synchronization, and automatic timeout detection of machine runtime and sensor status.
- Designed a responsive web dashboard (HTML, CSS, JavaScript, Firebase SDK) to visualize live sensor data, machine status, and runtime history.
- Implemented real-time alert and safety mechanisms with sensor-triggered notifications and modular system architecture for scalability and maintainability.

### PROJECTS

#### Dockerized Finance Tracker

Jul 2025 - Jul 2025

**Tech stack:** HTML5, CSS3, Node.js, Express.js, MongoDB, JavaScript (ES6+), Docker, RESTful API design

- Full-Stack Web Application Development (Finance Management System)
- Containerized Microservices Deployment using Docker & Docker Compose
- RESTful API Design and Implementation with Node.js, Express.js, and MongoDB
- Frontend Development with Handlebars, JavaScript (ES6+), HTML5, and CSS3

#### Autonomous Robotic Car

Feb 2025 - Feb 2025

**Tech stack:** Arduino, C++, Sensor Integration, Motor Control

- Engineered an autonomous vehicle that achieved a 95% success rate in obstacle avoidance by implementing an active scanning system with a servo-mounted ultrasonic sensor.
- Implemented a dual-sensor hazard system (flame and temperature) that achieved an 85% detection rate in test conditions, triggering an automated fan response.

#### Joystick-Controlled Robotics Arms

Feb 2025 - Feb 2025

**Tech stack:** Arduino, C++, Servo Motors, Joystick Module

- Designed and built a 4-axis (4-DOF) robotic arm for precise object manipulation.
- Implemented intuitive, real-time control logic using a physical joystick module to translate user input into complex servo movements.

#### Smart Automatic Door System

Feb 2025 - Feb 2025

**Tech stack:** Arduino, Wokwi, Sensor Integration (Ultrasonic, LDR, DHT11)

- Designed and simulated a smart door system that opens and closes automatically based on real-time data from multiple integrated sensors (distance, light, and temperature).

#### Simple E-Commerce

Mar 2024 - Mar 2024

**Tech stack:** Java, Android Studio, Android SDK, SQLite, Retrofit, SharedPreferences, Gradle

- Developed an Android application using Java with user authentication (login & registration), local database (SQLite), and shared preferences for session management.
- Implemented modular architecture with adapters, API client-service integration, and transaction management to handle product data and user activities.
- Designed and managed core app features such as cart system, profile management, and transaction history to enhance user experience and data persistence.

### EDUCATION

#### Bachelor of Science in Computing

Sep 2023 - Present

President University

GPA : 3.75/4.00 (96 credits)

Honor : Jababeka Scholarship Recipient (75% Coverage)

Concentration : Internet of Things (IoT)

### CERTIFICATIONS

Certificate of Bootcamp – "IoT-Enabled Machine Connectivity with Secure MQTT Protocol" by PT. Mattel Indonesia

August 2025

### LANGUAGES

Bahasa Indonesia (Native proficiency)

English (Limited working proficiency)