

Bagus Eka Bagaskara

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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, Blender, 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 Intern

Apr 2025 - May 2025

Badan Riset dan Inovasi Nasional (BRIN)

Tangerang Selatan, Indonesia

- Designed a GNSS-based IoT monitoring system using ESP32, Walksnail GPS, and DHT11 sensor.
- Parsed NMEA data, structured JSON, and transmitted securely via MQTT at 15-sec intervals.
- Built a custom 3D-printed enclosure for field deployment and testing.
- Integrated hardware and firmware using Arduino IDE, MQTTX, and Tinkercad.

Operations Intern (PKL)

Jun 2022 - Aug 2022

PT YUJU Indonesia

Bekasi, West Java

- Streamlined AC component prep and inventory for 100+ installations and maintenance tasks.
- Assisted technicians and reduced prep errors by 20%, improving efficiency.
- Managed inventory records to minimize shortages and delays.

PROJECTS

Dockerized Currency Converter [↗](#)

Jul 2025 - Jul 2025

Technologies: Python, Flask, Docker, REST API

- Engineered and deployed a containerized full-stack web application using Docker, reducing environment setup time by over 90% and ensuring deployment consistency.
- Developed a Flask-based REST API that integrated with a third-party service to provide real-time conversion rates for over 10 global currencies.

Personal Portfolio Website [↗](#)

Jun 2025 - Jul 2025

Technologies: Vercel, JavaScript, HTML/CSS

- Designed and deployed a personal portfolio website from scratch to showcase projects and skills, featuring a fully responsive layout for all devices.
- Implemented interactive features such as project detail pop-ups and dynamic elements to enhance user experience.

Autonomous Robotic Car [↗](#)

Feb 2025 - Feb 2025

Technologies: 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

Technologies: 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

Technologies: 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).

Urban Night City (3D Animation) [↗](#)

Nov 2024 - Jan 2025

Technologies: Blender, 3D Modeling, Animation, Particle Simulation

- Created a complete low-poly 3D animated scene, handling all aspects from environmental design and dynamic lighting to character rigging and animation.
- Rendered a dynamic environment with realistic particle effects for rain and splashes, complete with camera motion to produce a final video sequence.

PHP-Based E-Commerce & Inventory System [↗](#)

Mar 2024 - Mar 2024



Technologies: PHP, MySQL, JavaScript, HTML/CSS

- Developed a full-stack e-commerce platform using PHP and MySQL with a dual-role architecture for both customers and administrators.
- Created a comprehensive Admin Panel with full CRUD functionality for managing products, categories, and inventory levels.
- Built a customer-facing "digital showroom" that displays real-time product stock to drive traffic to the physical store.

EDUCATION

Bachelor of Science in Computing	Sep 2023 - Present
President University	GPA: 3.67/4.00
Honors:Jababeka Scholarship Recipient (75% Coverage)	
Concentration: Internet of Things (IoT)	
Vocational High School Diploma in Computer and Network Engineering (TKJ)	May 2020 - May 2023
SMK Armaniyah – Bekasi, Indonesia	GPA: 83,91/100
<ul style="list-style-type: none">Specialized in computer networking, server administration, and hardware troubleshooting.	

CERTIFICATIONS

Certificate of Internship – Research Center of Electronics BRIN (Credential ID: B-13194/III.6.2/TK.14/6/2025)  by Badan Riset Jun 2025 dan Inovasi Nasional (BRIN)	
Certificate of Achievement – Urban Night City  by President University, FINPROTION 2025	Feb 2025

LANGUAGES

Bahasa Indonesia (Native proficiency) • **English** (Limited working proficiency)