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

Hard Skills: C++, Python, JavaScript, SQL, HTML/CSS, Microcontroller Programming (Arduino/ESP32), Sensor Integration, Motor Control, MQTT, React, Responsive Design, Git, GitHub, Docker, Wokwi, Blender.

Soft Skills: Problem Solving, Effective Communication, Initiative, Time Management, Adaptability, Openness to Feedback.

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
- Built & deployed containerized web app with Docker, cutting environment setup time by 90%.
- Developed Flask REST API for real-time conversion of 10+ global currencies.

Personal Portfolio Website ⧉ — Jun 2025 - Jul 2025
- Designed & deployed a personal portfolio (Next.js, Vercel) to showcase projects and skills online.
- Features responsive layout, live demos & GitHub integration.

Autonomous Robotic Car ⧉ — Feb 2025 - Feb 2025
- Designed autonomous vehicle with 95% obstacle avoidance success using servo-mounted ultrasonic scanner.
- Added dual-sensor hazard detection (flame, temp) with 85% detection rate, triggering auto fan response.

Joystick-Controlled Robotics Arms ⧉ — Feb 2025 - Feb 2025
- Built 4-DOF robotic arm (Arduino, C++, Servo Motors, Joystick) for precise object manipulation.
- Implemented real-time joystick control logic.

Smart Automatic Door System ⧉ — Feb 2025 - Feb 2025
- Designed & simulated smart door using Arduino, Wokwi, Ultrasonic, LDR, and DHT11 sensors.
- Automated open/close based on real-time distance, light, and temp input.

Urban Night City (3D Animation) ⧉ — Nov 2024 - Jan 2025
- Created low-poly 3D city scene with Blender: modeling, rigging, lighting & animation.
- Rendered dynamic environment with particle effects & camera motion.

EDUCATION

Bachelor of Science in Computing — Sep 2023 - Present
President University — GPA: 3.72/4.00
- 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
- 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 dan Inovasi Nasional (BRIN)** — Jun 2025

Certificate of Achievement – Urban Night City ⧉ by **President University, FINPROTION 2025** — Feb 2025

LANGUAGES

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