Essam Hisham

Developer & Robotics Engineer

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Professional Summary

Innovative Developer and Robotics Engineer with 3+ years of hands-on experience in designing, building, and integrating software and hardware solutions for autonomous systems, IoT, and embedded applications. Proven ability to deliver end-to-end projects—from concept to deployment—combining expertise in embedded systems, AI integration, and full-stack development. Seeking to leverage technical skills in a challenging role within robotics, AI, or software engineering to drive impactful solutions and continue professional growth.

Education

Grade 12, High School

[AL-Shaheed Mohammed Sabry Ahmed], Egypt

Expected Graduation: 2026

• Relevant coursework: Advanced Programming, Electronics

Technical Skills

Programming Languages

- C
- C++
- Python
- JavaScript

Technologies

- Arduino
- ESP32
- Raspberry Pi
- IoT

Frameworks & Tools

- React, Node.js, Express
- Tailwind CSS
- Git, GitHub
- Docker

- HTML/CSS
- Robotics

Expertise

- Embedded Systems
- AI Integration
- Robotics Development
- System Design

Professional Experience

Freelance Developer & Robotics Engineer

2023 – Present

- Designed and developed multiple robotics and IoT solutions for clients
- Built autonomous vehicles and AI-enhanced embedded systems
- Integrated hardware components with custom firmware and software

Intern – Robotics & AI Development

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- Contributed to AI-driven robotics applications development
- Programmed ESP32-based embedded systems
- Participated in testing and documentation of robotic systems

Project Portfolio

Smart Car Robot

Arduino, C++, Ultrasonic Sensors, IR Sensors

- Built autonomous vehicle with obstacle detection and line-following
- Engineered real-time control algorithms for navigation

AI-powered ESP32 System

ESP32, Gemini AI, WiFi, IoT

- Integrated Google's Gemini AI for real-time decision making
- Developed IoT framework for remote monitoring and analytics

Smart Weather Station

ESP32, Sensors, Cloud API, Mobile App

- Designed full-stack IoT weather monitoring system
- Implemented cloud integration and mobile interface

Additional Information

Languages: Arabic (Native), English (Fluent)

Hobbies & Interests: Robotics & AI, Software Development, Quantum Computing