Samaa Hassan Mohamed Shehab al-Din Engineering
Student
Address: Egypt, Alexandria, Agami | **Phone**: 01013452185 | **WhatsApp**: 01013452185
Email: samahasan680@gmail.com | LinkedIn: https://linkedin.com/in/samaa-hassan-543540258

Objective

I am a highly motivated engineering student with a strong interest in embedded systems, programming, and problem-solving. I have completed several technical projects and participated in volunteer-based learning and teaching initiatives. I'm seeking an opportunity to gain practical experience, improve my skills, and contribute to a professional team.

Education

College of Engineering, Al-Azhar University
The sixth Semester
Grade : Very Good

Skills

Technical Skills:

- Arduino programming (C++ using Arduino IDE)
- Sensor integration (MQ-2, LDR, IR Motion Sensor)
- Circuit design & breadboarding
- Basic electronics & microcontroller systems
- Debugging and system testing
- Power efficiency optimization in embedded systems

Computer Skills:

- Proficient in Microsoft Word
- Proficient in Microsoft PowerPoint

Soft Skills:

- Problem-solving
- Critical thinking
- Time management
- Independent project execution
- Adaptability and self-learning

Courses & Training

- **Introduction to Web Development** – Information Technology Institute (ITI), 2025
- **Object-Oriented Programming (OOP)** – Information Technology Institute (ITI), 2025
- **Soft Skills Training** – Online Course, 2024
- **Python Programming** – AZ-SENCS Volunteer Team, 2024
- **Java Programming Course** – IEEE Volunteer Team, 2024
- **Data Structures in C++** – IEEE Volunteer Team, 2024

Project Experience

Gas Leak Detector :

Date: April 2024

Description: Independently designed and implemented a gas leakage detection system using the MQ-2 sensor to monitor the presence of flammable gases such as LPG and methane. The system activates a buzzer and LED warning when dangerous gas levels are detected, providing an early alert to prevent hazards.

Tools & Technologies: Arduino Uno, MQ-2 Gas Sensor, Buzzer, LEDs, Breadboard, Jumper Wires, C++ (Arduino IDE)

Role: Full responsibility for all aspects of the project, including circuit design, sensor calibration, Arduino programming, and testing the system in various gas exposure scenarios.

Created a gas detection system that triggers an alarm using MQ2 sensor and buzzer.

Smart Street Lighting System :

Date: December 2024

Description: Developed a smart street lighting system that operates based on motion detection and ambient light conditions. The system automatically turns on LED lights only when motion is detected during nighttime or low-light situations, optimizing energy efficiency.

Tools & Technologies: Arduino Uno, IR Motion Sensor, LDR (Ambient Light Sensor), Breadboard, LEDs, Jumper Wires, C++ (Arduino IDE)

Role: Independently managed the entire project: hardware design, sensor integration, Arduino coding, and performance testing in real-world conditions.

Volunteer Experience

Programming Instructor – IEEE Volunteer Team

Year: 2025

Volunteered as an instructor, delivering sessions on Java programming and Data Structures in C++ to beginner-level students. Helped simplify complex topics and promoted peer learning through collaborative sessions.