Hussam Farooq

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Hamala hills, Hamala, Bahrain

Education

British School Bahrain **Hamala, Bahrain**

A Levels: Mathematics, Physics, Business, Chemistry

2025-Present

GCSEs: (Achieved 4 A*,1 A and B's across GCSE subjects, including A* in AQA Further Mathematics)

2024-2025 (Dubai,UAE)

Project Experience

Founder & Researcher | EcoMind – Engineering Solutions for a Sustainable Future **July 2025 – Feb 2026**

- Founded and developed EcoMind, a sustainability-focused initiative that raises awareness about climate change and its impact on human mental and physical well-being.
- Designed an educational website featuring climate research, sustainability resources, engineering solutions, and environmental awareness content.
- Explored hardware and mechanical engineering concepts such as smart environmental monitoring, renewable energy technologies, and sustainable infrastructure solutions.

Student Researcher | Autonomous Disaster Management Robot for Emergency Response Applications

Jan 2026 – June 2026

- Designed and developed an autonomous disaster management robot using Raspberry Pi 5, sensors, computer vision, and motor control systems for emergency response applications.
- Implemented human detection, fire detection, obstacle avoidance, and automated fire suppression using OpenCV, ultrasonic sensors, flame sensors, and a water pump system.
- Evaluated the robot's performance through testing in simulated disaster environments, demonstrating reliable navigation and hazard response capabilities.
- Won Best Prototype award at the SEEF dubai science fair

Smart Home Automation System using Arduino **August 2025 – Present**

- Developed an Arduino-based smart home system to automate lighting, environmental monitoring, and household appliance control.
- Integrated sensors for temperature, humidity, motion, and light detection to improve energy efficiency and user convenience.
- Applied embedded systems and IoT concepts to create an intelligent, automated, and user-friendly home environment.

KineTile renewable energy solution

- Designed using TinkerCAD a tile that is able to be pushed down (smaller scale currently) and is able to convert that kinetic energy from the impact to electrical energy
- A rack is attached to the bottom of the tile and as there are springs in each pillar of its foundation it is able to move the rack up and down , this causes it to spin a gear connected to a step motor which can be used to light and led or charge a battery

MKTG consultants L.T.D (internship) **May 2026 - June**

2026

- Gained work experience in a IT tech environment and contributed in terms of conceptualization and creation of an automated bot designed to manage and streamline a brand ambassador program as well as working on developing a planogram compliance system for commercial use in retail merchandising audits

Community Service:

Volunteer | Ittehad Welfare Foundation (NGO)
23 May 2025 – 30 May 2025

- Assisted with core field operations supporting community development initiatives.
- Visited educational and vocational training centers serving underprivileged women and children.
- Contributed to the Clean Water Initiative by helping support water pump installation projects in underserved communities.

Volunteer | Pakistan Women's Association, Bahrain
29 April 2025

- Assisted in preparing over 100 essential care packages for labor workers in Bahrain.
- Helped organize and distribute hygiene and personal care products to beneficiaries.
- Collaborated with volunteers to support community outreach and welfare initiatives.

Technical Skills

• **Python Programming & Software Development**

• **Robotics, Embedded Systems & IoT** (Arduino, Raspberry Pi, Sensor Integration)
• **Web Development** (HTML, CSS, JavaScript)