# AAMIR ALI

**Electronic Engineering | Embedded Systems and Edge AI**

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## Academic Profile

Electronic Engineering graduate with project experience in offline assistive learning, embedded diagnostics and IoT sensing. Combines NVIDIA Jetson hardware integration with industrial experience at Dawlance and sustained IEEE leadership. Seeking master's study in embedded intelligence, edge AI or robotics and control, with an interest in accessible and practical engineering systems.

## Education

### Bachelor of Engineering in Electronic Engineering

*Mehran University of Engineering and Technology, Jamshoro | Dec 2025*

CGPA: 2.91/4.00 | 137 earned credit hours | Medium of instruction: English

Selected results: A+ in Electronic Engineering Project I and II; A+ in Mechatronics Systems & Applications; B+ in Embedded Systems Design theory; A in Artificial Intelligence practical.

## Research Interests

Embedded intelligence and edge AI; accessible assistive technology; industrial sensing and diagnostics; robotics and control.

## Selected Technical Projects

### Braille Learning with Generative AI and Edge AI | Final Year Project

*Oct 2024 - Nov 2025 | NVIDIA Jetson AGX Orin and Jetson Nano*

- Contributed to an offline Braille tutor combining generative AI and edge computing with voice and image-based learning interaction.
- Worked on hardware and software integration across NVIDIA Jetson platforms for local operation.
- Project received EPICS in IEEE funding and second place at the 2025 MUET Electronic Engineering Final Year Project Exhibition.

### RefriScan | Refrigerator Diagnostics and PCBA Testing

*Apr - Sep 2026 | ESP32-S3, UART, I2C, Node-RED*

- Developed an embedded diagnostic platform during the Dawlance traineeship for printed circuit board assembly (PCBA) testing and hardware fault identification.
- Decoded UART telemetry to monitor temperature sensors, compressors, fans and heaters; enabled wireless transfer to Node-RED for diagnostics and service-mode control.

### IoT Health Monitoring and Alert System

*Mar - May 2024 | ESP8266, MicroPython, ThingSpeak*

- Built a sensing prototype to collect and transmit temperature and heartbeat measurements for remote monitoring; integrated sensors, firmware and cloud data transfer.

## Professional Experience

**Graduate Engineer Trainee | Dawlance (Beko), URIL Plant, Hyderabad**

*Apr - Sep 2026 | Pakistan Engineering Council traineeship*

- Supported PLC and Modbus activities in the advanced cooling lab and developed embedded solutions for refrigerator diagnostics and control-card testing.

**Robotics Instructor | Isra Foundation Schools, Hyderabad**

*Feb - Mar 2026*

- Taught robotics and STEAM through LEGO Mindstorms, Arduino, sensors and practical coding and hardware integration activities.

## IEEE Leadership and Academic Service

**IEEE MUET Student Branch | Chair and Secretary**

*Chair: Jan 2024 - Jul 2025 | Secretary: Dec 2022 - Dec 2023*

- Led student volunteers and organized technical and professional development activities, including IEEE Day and membership orientation events.

Chair, IEEE PELS MUET Student Branch Chapter | Jul - Dec 2025
Filed the petition to establish the chapter, approved in July 2025.

Committee Member, IEEE PES Students and Young Professionals Region 10 | Aug 2024 - Sep 2025

Technical Chapter Coordinator, IEEE Karachi Section SAC Team | Aug 2023 - Apr 2024

UI/UX Design Intern, IEEE Region 10 Young Professionals GEMS | Jul 2023 - Jan 2024
Contributed to the design of the SCRIBLD magazine on space exploration.

Technical support volunteer, Edge AI workshop at IEEE IICT 2026 | Jan 2026

## Honors and Awards

Best Student Branch Volunteer Award - IEEE Karachi Section, 2025 and 2023 award years

Best Student Branch Chair Award - IEEE Karachi Section, 2024 award year

Third Place - Edge AI Project Competition, MUET, 2025

Third Place - IEEE Karachi Section Ethics Competition, 2024

## Technical Skills

Programming: Python, C++, Embedded C, MicroPython, Assembly

Embedded hardware: ESP32-S3, ESP8266, Arduino, NVIDIA Jetson, Xilinx FPGA

Automation and interfaces: PLC ladder logic, TIA Portal, Modbus, SCADA, UART, I2C, Node-RED

Engineering tools: MATLAB/Simulink, Proteus, NI Multisim, LabVIEW, Xilinx ISE

AI and documentation: TensorFlow, LaTeX, Microsoft Office

## Selected Professional Development

Getting Started with AI on Jetson Nano - NVIDIA, 2025

Jetson Nano Starter to Pro - Packt / Coursera, 2025

Introduction to the Internet of Things & Embedded Systems - UCI / Coursera, 2024

## Languages

English | Urdu and Sindhi (native)