

Arooj Fatima

Electrical Engineer

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[LinkedIn Profile](#)

Objective

I'm an Electrical Engineer with a strong background in embedded systems, real-time computing, and programming in C/C++, Python, and Assembly. I've worked on projects involving microcontrollers, IoT-based solutions, and hardware-software integration, using tools like MATLAB and Arduino. My experience includes developing intelligent systems with sensor data, machine learning, and weather insights to optimize performance. I'm particularly interested in embedded programming, low-power systems, and real-time applications, and I'm driven to build efficient, impactful software solutions.

Education

Bachelors in Electrical Engineering

CGPA: 3.14

- Final Year Design Project:** "IoT-Based Crop Monitoring and Weather-Based Crop Recommendation System for Namal's AgriTech Farm"

Description: Developed two independent systems: a real-time soil monitoring dashboard using IoT sensors, and a crop recommendation system based on weather forecasting and machine learning. Each module addresses distinct aspects of smart farming—monitoring field conditions and guiding optimal crop selection.

- Completed Intermediate from Daanish Girls School & College in 2021
- Matric from Daanish Girls School in 2019

Marks Percentage: 96%

Marks Percentage: 94%

ACADEMIC PROJECTS

- Speed Control of DC Motor
- Robotic Car using AVR (Using ATMEGA328p)
- Line Following Robot (Using LEGO Mindstorms EV3)
- RISC-V Single Cycle Processor
- Library Management System (using C++)
- Air Quality Index (AQI) Prediction using Machine Learning

Skills

- Languages:** C/C++, Python, Assembly and Matlab.
- Technologies and tools:** Arduino IDE, Espressif IDF, pspice, VS code, proteus, ETAP

Courses

- Control Systems
- Embedded system
- Power Electronics
- Digital logic design
- Internet of things
- Machine Learning
- Digital Signal Processing
- Communication Systems
- Wireless Communication
- Data Structures & Algorithms

Work Experience

Fauji Fertilizers Company, Goth Machhi (Summer Intern)

08/2024-09/2024

- Gained hands-on experience in industrial processes, electrical systems, and maintenance procedures while working alongside engineering professionals.

Fatima Fertilizers Comapny Limited, Sadiqabad (Summer Intern)

07/2024-08/2024

- Worked on electrical maintenance, troubleshooting industrial equipment, and understanding power distribution systems in a large-scale manufacturing environment.

Reference

Supervisor: Dr. Farrukh Qureshi (Assistant Professor) at Namal University Mianwali
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