Fahim Ur Rehman Shah

Electrical Engineer

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Professional Objective

- A motivated and proactive engineering student specializing in IoT, embedded systems, and wireless communication. Seeking opportunities to expand knowledge in Artificial Intelligence and Machine Learning while integrating hardware and software skills to develop innovative, intelligent systems.

Education

NAMAL UNIVERSITY MIANWALI **Nov 2021 – Expected Jul 2025**
Bachelor of Science in Electrical Engineering, CGPA: 2.89/4.00

CAPITAL DEGREE COLLEGE **Oct 2019 – Oct 2021**
Intermediate (HSSC) in Pre-Engineering, Grade: A1, 986/1100 (89.63%)

AL ABBAS SCIENCE SCHOOL **Mar 2017 – Jun 2019**
Matric (SSC) in Science, Grade: A1, 970/1100 (88.18%)

Technical Skills

Embedded Systems: Arduino, ESP32 DevKit, ESP32-S3, ESP IDF
Programming: Python, C++, Micro-Python, Kotlin
Development Tools: VS Code, Proteus, Orcad Capture, KiCad EDA
Engineering Software: AutoCAD Electrical, Matlab, Windsurf
Areas of Interest: Machine Learning, Artificial Intelligence, IoT, Robotics, Android Development

Projects

SMART HYDROPONIC (Final Year Project) *2024 – Present*
High-impact IoT and machine learning-driven hydroponic farming technology that optimizes resource use while maximizing crop yield through real-time monitoring and intelligent automation.

DIGITAL IMAGES NOISE DETECTIVE *2024*
Designed and implemented a comprehensive digital image processing solution for noise identification and reduction using statistical analysis, targeted filtering algorithms, and a PyQt5-based GUI, enabling adaptive noise detection and removal while preserving image integrity.

HOSPITAL MANAGEMENT SYSTEM *2024 – Present*
Architected and implemented a comprehensive hospital management database solution using MySQL, featuring optimized data structures for patient records, medical inventory, staff scheduling, and billing workflows to enhance operational efficiency.

LINE FOLLOWER *2024*
Developed and implemented a precision PID control algorithm for a line-following robot on the Lego

EV3 platform, leveraging MicroPython and Lego Mindstorms to achieve stable tracking performance and responsive navigation capabilities.

Leadership Experience

NAMAL ENVIRONMENTAL CLUB **2025 – Present**
Human Resources Manager: Managed recruitment, member engagement, and sustainable development initiatives.

NAMAL SOCIETY FOR SOCIAL IMPACT (NSSI) **2023 – 2024**
Head, Education Wing: Led 40+ teachers, 6 co-heads, and 100+ students. Organized district-level competitions where students excelled in skit and quiz competitions, securing top positions.

NAMAL SOCIETY FOR SOCIAL IMPACT (NSSI) **2022 – 2023**
Co-Head, Education Wing: Led the society's teachers one day per week, managing their duties and fostering collaboration for enhanced operational efficiency.

NAMAL SOCIETY FOR SOCIAL IMPACT (NSSI) **2021 – 2022**
Teacher, Education Wing: Taught Mathematics, Physics, and Science.

Certifications & Achievements

- Runner-Up, Robotics Competition at Bahria University Islamabad (2024)
- AI Inofest, Bahria (Feb 2024)
- Data Structure and Algorithm in Python (Jun 2023)
- Python Basics (Jun 2023)
- C++ Basics and OOP (Apr 2023)
- Create a Virtual Machine Using Microsoft Azure (Feb 2023)
- NSSI Education Wing (Jan 2023)
- MATLAB Onramp (Oct 2022)