Shaheer Dastgir

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SUMMARY

Final-year Electrical Engineering student with hands-on experience in Internet of Things (IoT), embedded systems, and wireless communication. Proficient with ESP32, Raspberry Pi, Raspberry Pi Pico, and Arduino. Experienced in using diverse sensors and communication protocols (I2C, SPI, UART, BLE, Wi-Fi). Passionate about building smart, connected systems through efficient hardware-software integration.

EDUCATION

Namal University, Mianwali, Pakistan
BS in Electrical Engineering 2021 – 2025
Relevant Coursework: Internet of Things, Wireless Communication, Communication Systems, Embedded Systems, Data Structures & Algorithms, Computer Networks, Digital Logic Design

EXPERIENCE

IoT Intern, SmartTech Solutions, Remote Jan 2025 – Jun 2025

- Developed IoT-based monitoring systems using ESP32 and Raspberry Pi for real-time data collection and remote access.
- Integrated various sensors (temperature, humidity, PIR, gas) using I2C, SPI, and UART protocols.
- Deployed MQTT and HTTP communication for cloud-based control and monitoring.

Jr. Research Assistant, Big Data and AI Center, Namal University Jun 2023 – Jun 2025

- Designed and implemented RISC-V CPU in Verilog; verified using Questasim.
- Supported AI-integrated hardware projects; contributed to edge computing research.

Python Programming Intern, Digital Empowerment Network (DEN), Remote Sep 2024 – Dec 2025

- Automated IoT data logging using Python and developed web interfaces for data visualization.
- Built real-time scrapers and integrated ML models for predictive analysis.

PROJECTS

Smart Home Automation System (Feb 2025 – May 2025)
ESP32-based control of lights and appliances using Wi-Fi and mobile app; included PIR and temperature sensors.

Environmental Monitoring with Raspberry Pi (Nov 2024 – Jan 2025)
Built a real-time monitoring dashboard using Raspberry Pi, DHT11, and MQ135 sensors; data transmitted over MQTT.

Obstacle-Avoiding Robot (2023)
Arduino-powered robot using IR sensors, L293D motor driver, and ultrasonic sensing for navigation.

Hotel Management System (2025)
Tkinter GUI interfaced with MySQL for customer and room management.

SKILLS

Languages: Python, C++, Verilog, Assembly
Technologies: ESP32, Raspberry Pi, Arduino, Raspberry Pi Pico, MySQL, Git

Protocols: I2C, SPI, UART, MQTT, BLE, Wi-Fi
Tools: Questasim, GTKWave, Linux, GCC, Jupyter
Soft Skills: Communication, Problem Solving, Team Collaboration

CERTIFICATIONS

Internet of Things – edX (2024)
Wireless Communication – Coursera (2024)
Embedded Systems – edX (2024)
ML Specialization – Coursera (2024)
Python Internship – DEN (2025)
MIPI Verification – Namal (2025)

LANGUAGES

English: Professional Working
Urdu/Punjabi: Native