Muhammad Hannan Asif

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Professional Objective

Highly motivated **Electronics and Embedded Systems Engineer** with hands-on experience in circuit design, PCB layout, and microcontroller programming. Proven ability in embedded systems, firmware development, and renewable energy solutions, with a strong aptitude for designing, optimizing, and troubleshooting electronic systems. Passionate about innovation in IoT, AI-driven hardware, and robotics.

Technical Skills

Embedded Systems

ARM Cortex, Arduino, ESP32

Communication Protocols I2C, SPI, UART, CAN, Modbus

Programming

C, C++, Python, Embedded C

Hardware Design

PCB Layout (Proteus, Easyeda), Circuit Debugging

Debugging & Testing

Oscilloscope, Logic Analyzer, Multimeter Firmware Development

FreeRTOS, Bare Metal

Software Tools

Arduino IDE, MATLAB, Simulink, AutoCAD

Professional Experience

Electronics Engineer

Leather Coordinator

Sahiwal, Pakistan | February 2024 – December 2024

- Designed and developed electronic and electrical systems for leather-integrated components.
- Delivered technical solutions to optimize manufacturing processes and ensure compliance with industry standards.
- Coordinated cross-functional teams to implement innovative production techniques.

Project Engineer

Penta.H Renewable Solar

Lahore, Pakistan | August 2023 – January 2023

- Conducted site assessments and assisted in installing solar panels and renewable energy systems.
- Contributed to system design and troubleshooting, enhancing project efficiency and reliability.

Sales Representative

Switch Enterprises

Lahore, Pakistan | June 2023 - July 2023

- Engaged with international customers to identify needs and provide tailored telecommunications solutions.
- Ensured client satisfaction through effective communication and comprehensive service delivery.

Lead Generation

Xihaxks

Lahore, Pakistan | April 2025 - Present

- Conducted targeted B2B lead generation for IT and software services using tools .
- Researched and compiled prospect lists, improving client outreach efficiency by 30%.
- Coordinated with the sales team to qualify leads and streamline the conversion process.
- Contributed to client acquisition strategy through CRM updates and performance reporting.

Freelancing Experience

Freelance Embedded Systems Engineer

Fiverr & Upwork | Remote | 2022 - Present

- Delivered custom embedded solutions for clients globally, including IoT-based automation, robotics, and sensor interfacing projects.
- Designed PCBs using Proteus and EasyEDA for consumer and industrial applications.
- Programmed microcontrollers (Arduino, ESP32, STM32) with C/C++ and Python for bare-metal and RTOS-based systems.

Education

The University of Lahore

Bachelor of Science in Electronics and Electrical Systems Lahore, Pakistan | September 2019 – October 2023

GPA: 3.4/4.0 | Batch Topper (2023) | Scholarship Recipient

Key Courses: Artificial Intelligence, Internet of Things, Embedded Systems, Data Communication

Projects

Freelanced Projects:

- **Hand Gesture Car:** Developed a gesture-controlled car using Arduino and sensors for detecting hand movements.
- **Vertical Farming Using IoT:** Created a vertical farming system integrated with IoT sensors and the Blynk app for remote monitoring and control.
- **RFID Door Lock:** Designed an RFID-based security system for controlled access.
- Face Recognition Door Lock: Implemented a facial recognition system for secure and convenient access control.
- Laser Fence System: Built a security system using laser beams to detect breaches.
- 3D Arm: Developed a robotic arm for tasks requiring precision in three-dimensional space.
- Smart Dustbin: Designed a waste management system with automatic features for enhanced efficiency.
- **Home Automation:** Created a smart home system to control devices via smartphone or voice commands.

Soft Skills

- Problem-Solving & Debugging
- Teamwork & Collaboration
- Time Management
- Self-Learning & Adaptability

Interests and Languages

Interests: Artificial Intelligence, Internet of Things, Embedded Systems, IoT innovations, Edge AI, Robotics, Open-source hardware development

Languages: English (Proficient), Urdu (Fluent), Chinese (Basic)