Muhammad Salman

Bachelor of Science in Computer Systems Engineering | **University of Engineering and Technology, Peshawar, Pakistan**.
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Work Experience

Xmark Labs, LLC, USA (Remote) | *Embedded System Engineer*   *Aug'2024 – Present*

- Implemented a sleep mode, increasing battery life from **37 days to 15 months** improving power efficiency by **1119%**.
- Synchronization among nodes using the on-board RTC chip, addressing time drift and improving network reliability.
- Developed **Nosy Mesh Tool**, for real-time monitoring and command panel for mesh nodes in the network.

Chip Soul Technology (SMC-Private) Limited, Peshawar, Pakistan | *Embedded Systems Engineer*   *Sep'2021 – 2024*

- Developed firmware for NRF52 Series, specializing in **NRF52840 SoC**, reducing development time by **20%**.
- **Optimized BLE Mesh Networks** by introducing real-time TTL and relay optimization, reducing packet loss and collisions. Improved message delivery reliability from **40-50% to 95%.**
- Implemented BLE solutions and Bluetooth Mesh Networks for IoT applications, enhancing connectivity and scalability.

Veevo Tech, Peshawar, Pakistan | *R&D IoT Engineer*   *Nov'2020 – 2021*

- Designed and developed IoT devices and sensors, reducing production costs by **30%** through efficient hardware design.
- Conducted research, testing, and documentation for IoT solutions.
- Worked on autonomous drone flight projects using Pixhawk4 flight controllers, improving flight accuracy.

Sarhad Rural Support Program, Peshawar, Pakistan | *Network Engineer*   *Oct'2019 – 2020*

- Gained experience with essential network protocols and tools like Wireshark.
- Collaborated with teams to document and present technical solutions, reducing on boarding time for new engineers.

Premier Logistics Solution, Peshawar, Pakistan | *Trainee Engineer*   *Apr'2019 – 2019*

- Troubleshot PCs, set up Local Area Networks, and configured routers and switches.
- Provided support for Microsoft Word & Excel, ensuring smooth operations.

Technical Skills

- **Programming Languages**: C, C++, Python, Bash Scripting.
- **Embedded Systems**: STM32, nRF52, Arduino MCUs, Raspberry Pi.
- **Firmware Development**: FreeRTOS, Zephyr, Keil, Segger Embedded Studio, IAR.
- **Communication Protocols**: I2C, SPI, UART, MQTT, Modbus, TCP/IP.
- **Debugging Tools**: Oscilloscopes, Logic Analyzers, J-Link Debuggers.
- **Development Tools**: VS Code, Git, CMake.

Certifications

- **KPYOUTH Employment Program (IoT)**: Gained practical skills in IoT systems, including sensor integration, micro-controller programming, and cloud data transmission.
- **KPYOUTH Employment Program (Raspberry Pi)**: Specialized in Raspberry Pi sensor integration, programming, configuration, and cloud connectivity for IoT applications.
- **CMake Cross Platform Build Systems**: Demonstrated proficiency in using CMake for scalable build system management in C/C++ projects.