DOST MUHAMMAD SHAH

IoT & Embedded Systems Specialist | Electronics Engineer & PCB Design Expert
Design & Development Lead |15+ Years Experience
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SUMMARY

Accomplished Electronics Engineer and Design & Development Lead with 15+ years of hands-on experience in IoT hardware, embedded systems, and scalable solutions. Expertise in leading full-cycle design and development of smart gateways, PCBs, firmware, and cloud-integrated IoT platforms for smart home, building automation, and industrial applications. Proven team leadership in hardware/firmware projects, mass production transitions, and custom Zigbee network optimization. Passionate about delivering reliable, production-ready IoT products that drive real-world efficiency and connectivity.

EXPERIENCE

Design & Development Lead – Electronics & IoT

Jan 2017 - Present (8+ years)

KINDOWS Tech Solutions — Seeb, Muscat Governorate, Oman

- Lead design and development of electronics, embedded systems, mobile applications, and cloud platforms as the primary Team Lead.
- Spearheaded the development of a self-designed state-of-the-art, scalable IoT cloud server, enabling remote device management, data analytics, and advanced user features., a pivotal component of the company's infrastructure.
- Designed a feature-rich smart home/building IoT gateway, integrating advanced Wi-Fi mesh networking, smart home appliances, multi-room audio, and face-recognition-based video systems.
- Oversaw the design and production of high-performance PCBs, including motherboards and single-board computers, ensuring optimal functionality and quality.
- Established an in-house Zigbee firmware development team, implementing custom algorithms for optimized network performance.

Lead Hardware/Embedded Systems Engineer Feb 2013 - Dec 2016 (3 years 11 months)
KINDOWS Tech Solutions — Seeb, Muscat Governorate, Oman

- Developed a feature-rich smart home/building IoT gateway, integrating advanced networking and smart device control capabilities.
- Successfully transitioned complex PCB designs into mass production, collaborating with PCBA service providers in China for optimal outcomes.
- Implemented custom Zigbee firmware algorithms to optimize network functionality and performance.
- Developed solutions utilizing OpenLinux and embedded AT on 4G mobile modules for connected IoT applications.

Hardware/Embedded Systems Engineer Feb 2010 - Jan 2013 (3 years)
KINDOWS Tech Solutions — Seeb, Muscat Governorate, Oman

- Developed core elements of the company's IoT cloud server, laying the groundwork for future expansions and advanced features.
- Designed initial smart home products, including PCB layouts and firmware integration with control systems.

EDUCATION & TRAINING

NWFP University of Engineering & Technology, Peshawar

- Bachelor of Engineering (BE), Electronics Engineering | 2005 - 2009
- Grade: 2.9/4.0

CERTIFICATIONS

IBM Blockchain

- IBM Blockchain Foundation for Developers (Coursera, Feb 2018)
- IBM Blockchain Essentials (IBM, Jan 2018)

Internet of Things (IoT)

- An Introduction to Programming the Internet of Things (IoT) Specialization (Coursera, Dec 2016)
- Internet of Things: Communication Technologies (Coursera, Dec 2015)

Web and Mobile Development

- Web Connectivity and Security in Embedded Systems (Coursera, Nov 2017)
- Programming Mobile Applications for Android Handheld Systems(Coursera, Aug 2016)
- Programming and the Web for Beginners (Coursera, Feb 2016)

Emerging Technologies

- Smartphone Emerging Technologies (Coursera, Oct 2016)
- Introduction to Artificial Intelligence (Stanford , Aug 2016)

SKILLS

- **Programming:** C, C++, Java, Python, PHP, HTML, JavaScript, CSS, SQL, Dart, Rust, Kotlin, Swift
- **IoT/Embedded:** Linux, OpenWrt, Buildroot, Zigbee, MQTT, CoAP, REST, TCP/UDP, Bluetooth, FreeRTOS, Camdroid, Android, Android NDK development, OpenLinux, Embedded AT (4G Modules)
- **Design:** Autodesk Eagle, Altium Designer, KiCad, NXP GUI-GUIDER, AutoCAD
- **Networking:** Cisco managed switches, SIP applications, Asterisk, Protocols: TCP/UDP, MQTT, Zigbee, REST, UPnP, DLNA, P2P, AMQP, CoAP, nanomsg, SOAP, ONVIF, SIP
- **Web Development:** Laravel framework
- **Smart Home Integration:** Google Smart Home, Actions on Google
- **Computer Vision:** Smart vision cameras, API/SDK integration, ANPR
- **Management:** Jira, Scrum, Agile