Satyam Khanna

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Objective

Passionate Embedded Hardware Engineer with a focus on industrial IoT systems, multi-layer PCB design, and end-to-end product development. Skilled in firmware, embedded systems, IoT sensors, and basic data structures and databases, with strong analytical, communication, and collaboration abilities. Known for a proactive, can-do attitude and adept at transforming requirements into schematics, layouts, board bringup, validation, and deployment. Seeking an impactful role in a fast-paced Agile environment to innovate and grow.

Experience

Senior IoT Engineer Jun 2024 – Present
Vylt Technologies *Gurugram*

- Engineered modular multi-layer PCB architectures for industrial IoT devices in automation, supply chain, and asset tracking, enabling faster design iterations.
- Implemented remote MHE monitoring devices with IoT sensors that improved operator productivity tracking and provided real-time IoT data visibility to the cloud dashboard, boosting productivity to over 80%.
- Delivered complete product stacks from architecture to schematic, PCB layout, enclosure CAD, and field validation, shortening prototype-to-deployment cycles by 35%.
- Utilized Git-based version control and Agile Scrum methods to streamline design handoffs and collaborative reviews.

Graduate Engineer Trainee Nov 2023 – Jun 2024
VVDN Technologies *Gurugram*

- Contributed to the design, testing, and troubleshooting of electronic circuits, PLC interfaces, and hardware components.
- Executed board bringup and diagnostics for multiple prototypes, achieving functional validation within 2 weeks of assembly.
- Documented and assembled 4+ prototype boards, completing board bringup and diagnostics in under 2 weeks to enable pilot production.

Hardware Design Intern Dec 2022 – Oct 2023
VRSIIS *Noida*

- Created 4-layer PCB layouts in place of a previously employed 2-layer board for industrial monitoring and automation systems while applying DFM/DFT, EMI/ESD, and signal integrity design practices, reducing board noise by 30%.
- Optimized component selection to cut BOM cost by 15%, while maintaining performance and regulatory compliance.
- Performed board bringup and validation, achieving first-pass success on 3 hardware designs.

Embedded Engineer Intern Feb 2022 – Dec 2022
Otomator Technologies *Noida*

- Converted requirements into stackable IoT PCB modules with modular power and communication buses, improving system scalability across 4 commercial projects.
- Authored comprehensive design documentation and architecture diagrams, cutting design review cycles by 25%.

PCB Design Intern Jul 2021 – Oct 2021
Bipolar Factory *Coimbatore*

- Built a custom CM4 carrier board with high-speed Ethernet and USB interfaces for data aggregation.
- Collaborated with firmware teams to cut board bringup time from 3 weeks to 1 week, accelerating prototype validation.

Product Design Trainee Feb 2019 – Feb 2020
ElectroField *Ghaziabad*

- Designed a PMDC motor driver achieving 90% drive efficiency and contributed to a prototype shoe sanitizer device that was presented to stakeholders.
- Gained hands-on experience in power electronics, enclosure prototyping, and product safety compliance.

Projects

Node-Broker IoT Device | Modular PCB, IoT Sensors, Data visibility 2025

- Architected a modular 4-layer PCB integrating 3+ IoT sensor channels, supporting environmental data collection for agriculture.
- Deployed over 100 production units in the field with remote firmware update support, UART debugging interface, and cloud connectivity.

Industrial IO Board | LAN-based Control Board for Automation 2023

- Developed a LAN-based control board with expandable I/O ports as a cost-effective PLC/SCADA alternative.
- Integrated relay drivers, surge protection, and modular expansion slots to support industrial automation and compliance standards.

CM4 Network Aggregator | High-speed PCB, Carrier Board 2021

- Implemented a CM4 carrier PCB integrating multiple Ethernet and USB interfaces for high-speed data streaming and edge gateway applications.

Skills

PCB & Hardware: Altium Designer, multi-layer PCB, high-speed design, EMI/ESD, DFM/DFT, signal integrity
Embedded: STM32, ESP32, C, C++, Python, CAN, RS485, UART, SPI, I2C, board bringup, debugging
Automation: PLC, SCADA, Industrial automation, sensors, IoT security basics
Cloud & DevOps: AWS (IoT Core), basic cloud integration, version control (Git), Agile/Scrum
Testing Tools: Oscilloscope, Logic Analyzer, Multimeter
RF/IoT: LTE/4G, BLE, Wi-Fi, Ethernet modules, IoT sensors
CAD: 3D enclosure design, modular stack designs
Soft Skills: Communication, presentation, analytical thinking, problem-solving, design thinking, teamwork, multitasking

Education

KIET Group of Institutions 2019 – 2023
B.Tech. in Electronics and Communication Engineering *Ghaziabad, Uttar Pradesh*