

# SATYAM KHANNA

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## OBJECTIVE

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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

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### 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

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- 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

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**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

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