

Kinshuk Pandala

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Education

VIT Bhopal University

B.Tech in Electronics and Communication Engineering, 7.83 CGPA
Specialization in Artificial Intelligence and Cybernetics

Madhya Pradesh, India

Sept 2023 – Present

Experience

Intern – Bharat Electronics Limited (BEL)

Strategic Communication SBU

May 2025 – June 2025

Bengaluru, India

- Worked across procurement, hardware testing, and verification stages of secure communication systems within a PSU defense environment.
- Executed hardware-level PCB testing and validation for encryption-compliant communication boards, following defined test procedures (project details confidential).
- Produced test documentation and supported simulation-based analysis to verify system reliability and compliance.

Projects

QUENCH – Smart Water Vending Machine

IoT-enabled smart hydration system with wireless payment and real-time monitoring

Jan 2025 – Apr 2025

- Architected and implemented an end-to-end IoT system integrating embedded firmware, communication protocols, and a backend dashboard.
- Developed ESP32 firmware for sensor interfacing, actuator control, and UART-based device communication.
- Designed a Flask-based monitoring interface and integrated MQTT for reliable device-server data exchange.

Wi-Fi Controlled Mobile Robot (ESP8266)

IoT-based mobile robot enabling real-time wireless control over a local network

Sep 2024 – Dec 2024

- Designed and built a mobile robot using ESP8266 (NodeMCU) and L298 motor driver for bidirectional motor control.
- Programmed firmware for Wi-Fi communication, configuring the ESP8266 in AP mode for direct device connectivity.
- Developed a web-based control interface to issue HTTP commands for real-time navigation.

Skills

Embedded & Hardware: ESP32, ESP8266 (NodeMCU), Raspberry Pi, Arduino, Sensors & Actuators, UART, MQTT

Programming: C, Embedded C, Python

Systems & Tools: PCB Testing, Hardware Validation, Arduino IDE, LTspice, MATLAB

Interfaces & Dashboards: Flask, JavaScript, HTML, CSS

Responsibilities

- **Financial Representative, Fusion Club (Non-Technical)** – Managed budgeting, expense tracking, and financial coordination for club activities and events.
- **Co-Lead, Content Team, Bit by Bit Club (Technical)** – Coordinated content planning for technical events, workshops, and outreach initiatives.

Additional Information

Languages: English, Hindi, Telugu, Kannada