Sourabh Shrivastava

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Education

Vellore Institute of Technology, Bhopal, Madhya Pradesh **Oct 2022 – Present**
B.Tech in Electronics and Communication Engineering *CGPA:* ***9.15/10***

School for Excellence, Dewas, Madhya Pradesh **May 2022**
MPBSE 12th Standard *Percentage:* ***93.00%***

School for Excellence, Dewas, Madhya Pradesh **May 2020**
MPBSE 10th Standard *Percentage:* ***98.33%***

Technical Skills

- **Programming Language**: Python, Embedded C, Java.
- **Tools and Technologies**: TinkerCad, LTspice, keil uVision5, Raspberry-pi, Arduino, Node MCU.
- **Course-Work**: Embedded System, Computer Vision, IOT.

Projects

Smart Home Automation | *Embedded C, IoT, NodeMCU, Driver* **Oct 2024 – Dec 2024**

- Developed a NodeMCU-based Home Automation System with Blynk app integration for remote appliance control and security monitoring, including intruder detection, fire detection, and automatic day/night lighting.
- Used IR sensors for intruder detection, LDR for lighting control, and MQ2 sensor for fire detection. Controlled appliances and DC motors via driver circuits, LEDs, and smart automation logic, with data handled using blynk app.
- Achieved **85–90%** accuracy across varied environments, ensuring reliable operation under different conditions. Github

Gesture-Controlled Electronics | *Python, Mediapipe, OpenCV, Raspberry Pi 4B* **Feb 2024 – May 2024**

- Engineered a real-time gesture-controlled automation system using Raspberry Pi 4B and a 5MP camera to enable intuitive, touch-free control of electronic devices through computer vision for enhanced user interaction.
- Integrated a 4-channel relay module for multi-device control, interfacing LEDs and DC motors via GPIO pins, and used Mediapipe with OpenCV in Python to process live camera feeds and extract hand landmarks for control.
- Got **80–85%** accuracy across varied lighting and hand position conditions for consistent device interaction. Github

Fruits Spoilage Detection System | *Embedded C, IoT, Arduino* **Sep 2023 – Nov 2023**

- Developed an IoT-based spoilage detection system integrating MQ2 gas to monitor methane emissions, detect signs of decay, and assess the freshness of fruits and vegetables in real-time for improved food quality management.
- Designed a real-time feedback system using a 16x2 LCD for status display, LED indicators for alerts, a buzzer for alarms, and an ultrasonic sensor for precise placement, with a potentiometer for clear and user-friendly fruit selection.
- Achieved approximately **80% success** during real-world testing across multiple fruit and vegetable samples. Github

Externship

Mavon Silicon **Jan 2025 – Apr 2025**

- Worked as an Embedded System Design Intern, demonstrating applied proficiency with Arduino UNO Rev3, Raspberry Pi 3, and NodeMCU boards. Effectively integrated diverse sensors and gained hands-on experience with three serial communication protocols (UART, I2C, and SPI). Certificate

Extra-Curricular Activities & Achievements

- Honoured with **100%** scholarship under the **"STARS SCHEME"** at VIT Bhopal in August 2022 for securing 2nd rank in 12th grade (93%) at the district level.
- **1st rank** in 10th district merit.
- **Finalist**: Project Expo, Industrial Conclave (Dec 2024).
- Volunteered at a 2-day National Symposium on Innovations in Intelligent Systems (ANRF, Govt. of India), (Feb 2025).
- Solved **341+** problems on GeeksforGeeks.

Additional Information

- **Hobbies:** Watching and playing Cricket, Singing.
- **Languages:** English (Professional), Hindi (Native).