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:* ***9.03/10***

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

Fruits Spoilage Detection System | *Embedded C, IoT, Arduino* **September 2023 – November 2023**

- Developed an IoT-based spoilage detection system integrating MQ2 gas and ultrasonic sensors to identify methane emissions and assess freshness of fruits and vegetables in real-time.
- Designed a responsive real-time feedback mechanism using a 16x2 LCD, LED indicators, and buzzer alerts to ensure intuitive, user-friendly spoilage notifications.
- Achieved approximately **78% success** during real-world testing across multiple fruit and vegetable samples. Github

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

- Engineered a real-time gesture-controlled automation system using Raspberry Pi 4B and a 5MP camera, enabling intuitive control of electronic devices via computer vision.
- Integrated a 4-channel relay module for multi-device control and interfaced components like LEDs, DC motors, and servos through GPIO pins, supported by jumper wires, breadboard, and precise gesture-to-action mapping logic.
- Utilized Mediapipe and OpenCV in Python to process live camera feed, extract hand landmarks, and recognize dynamic gestures for seamless device interaction.
- Achieved an estimated **80–85%** of accuracy across varied lighting and hand position conditions. Github

Smart Home Automation | *Embedded C, IoT, NodeMCU, Driver* **October 2024 – December 2024**

- Developed a NodeMCU-based Home Automation System integrated with the Blynk app for remote appliance control and real-time security monitoring, achieving **85–90%** accuracy across different environments.
- Implemented intruder detection using IR sensors, an LDR for automatic day/night bulb control, fire detection via an MQ2 sensor, and controlled appliances and DC motors through driver circuits, LEDs, and smart automation logic for energy efficiency. Github

Externship

Mavon Silicon **January 2025 – April 2025**

- Demonstrated applied proficiency with Arduino UNO Rev3, Raspberry Pi 3, and Node MCU boards. Effectively integrated diverse sensors to gain knowledge of 3 Serial Communication protocols. 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).