# SHREYA BHATTACHARYA

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#### **PROFILE**

Electronics and Communication engineering student with hands-on experience in embedded systems, IoT, and sensor-based automation. Skilled in PCB design, process optimization, and sensor integration for real-time industrial systems. Proficient with MATLAB, Arduino, and Raspberry

### **EDUCATION**

#### B.Tech in Electronics and Communication, VIT BHOPAL UNIVERSITY Oct 2022 - Apr 2026 • Current CGPA: 8.40 Bhopal, M.P. • Coursework: Digital Electronics, Embedded Systems, VLSI, Microprocessors High Schooling- PCM (10th: 89.8/100 | 12th: 84.16/100), ST. XAVIER'S HIGH SCHOOL 2019 - 2021 • Gained a strong analytical foundation, problem-solving skills, and practical knowledge in scientific Hardoi, U.P. concepts, preparing for an engineering career.

#### **SKILLS**

Technical Skills & Tools: C/C++, Python (basic), MATLAB, VS Code, GitHub, Arduino, Raspberry Pi, MongoDB, LT Spice Domain: Embedded Systems, IoT, System Integration, Signal/Analog Processing, Computer Vision, Circuit Simulation Soft Skills: Analytical Thinking, Communication, Team Collaboration, Problem Solving

### **CERTIFICATIONS**

VLSI Design Certification, Maven Silicon	Jan 2025 – May 2025
MATLAB Onramp & Simulink Onramp, Mathwork	Aug 2024
Computer Vision, Vityarthi	Aug 2024 – Oct 2024

	8
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PROJECTS	
<ul> <li>Gas Level Monitoring System</li> <li>Designed a real-time IoT-based monitoring solution using Raspberry Pi and MQ-02.</li> <li>Integrated live data streaming and alert systems to enable 40% faster incident response. Stored sensor data using structured formats suitable for query and visualization.</li> </ul>	Aug 2023
<ul> <li>Designing BioSensors (HEMT) using Silvaco</li> <li>Designed and simulated sensors using HEMT technology in Cadence.</li> <li>Focused on optimizing sensor performance for precise detection and efficiency, applying semiconductor design principles and advanced modeling techniques.</li> </ul>	Mar 2023
<ul> <li>VeriValue – Walmart Hackathon Project</li> <li>Created a QR-based traceability web platform for sustainability data and batch-wise product tracking.</li> <li>Useful for supply chain transparency and quality audits in production systems.</li> </ul>	Jul 2025
Criminal Detection Using Face Detection	Apr 2025

Apr 2025

- Designed and deployed a real-time face detection system using OpenCV and Python for surveillance; integrated camera module on Raspberry Pi and optimized detection with Haar Cascades..
- Optimized accuracy across diverse conditions for rapid database matching.

## **EXTRACURRICULAR ACTIVITIES**

Technical Lead, VITRONIX Club	Aug 2024 – Aug 2025
Directed a 25-member team, increasing club engagement by 40% through weekly workshops and coding	
sessions.	

#### Volunteer (National Symposium, ANRF)

Feb 2025

Contributed to event execution and logistics; learned coordination and event planning in a technical setup.