## Tribhuvan Verma

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#### Education

# VIT Bhopal University, Bhopal, Madhya Pradesh

2022-2026

B.Tech in Computer Science and Engineering (Specialization in Gaming Technology) — CGPA: 8.44/10

12<sup>th</sup> Standard - RPS Public School, Rewari (2022) — CBSE: 91% 10<sup>th</sup> Standard - RPS Public School, Rewari (2020) — CBSE: 93.4%

## **Projects**

### **Smart Waste Management – IoT-Based Solution**

- Designed IoT system using ESP32, HC-SR04 ultrasonic, and MQ137 gas sensors to measure bin fill levels and detect odors with 90% accuracy, displaying status through LED indicators.
- Developed web dashboard with HTML5, Tailwind CSS, JavaScript, Express.js, and Leaflet.js enabling admins to monitor bin status, locate bins by pincode, and reduce collection routes by 30%.
- Implemented AI waste classification system to guide users in proper waste sorting and enhance separation efficiency in urban areas.

### **Chaupal – Web-Based Community Platform**

- Developed community empowerment platform for Self-Help Groups (SHGs) featuring group messaging, video calling, polls, donation tracking, and resource management for rural digital inclusion.
- Architected scalable solution supporting 50+ users with focus on healthcare, education, and financial assistance through collaborative resource sharing.
- Designed intuitive, mobile-responsive interface promoting active community participation and strengthening rural cooperation networks.

### **AI-Powered 3D Racing Game with Imitation Learning**

- Engineered 3D car racing simulation in Unity where AI agent masters driving techniques through imitation learning and behavioral cloning from human gameplay patterns.
- Trained neural network on 1000+ driving trajectories, achieving 80%+ track completion rate with precise steering control, acceleration management, and collision avoidance.
- Demonstrated real-time autonomous vehicle behavior modeling in dynamic 3D environment, showcasing machine learning applications for self-driving systems.

## **Experience**

## Project Intern - ThirdEye AI Pvt. Ltd., Gurugram

- Worked on ML projects involving data cleaning, model training, and performance testing on real datasets.
- Built ML models from scratch, learned new frameworks and debugged code independently.
- Completed assigned project two weeks early, meeting technical requirements and presenting results to development team.

#### **Co-curricular Activities**

- LeetCode: Solved 150+ problems in data structures and algorithms.
- Participated in multiple hackathons, finished top 10 in game development competition.
- Created and published games on itch.io across different genres.

### **Professional Certifications**

- Oracle Certified Java Foundation Associate Core Java programming fundamentals and object-oriented principles
- IBM Certified Cyber Security Analyst Security analysis, threat detection, and incident response methodologies

**Core Technical Competencies:** Python, Java, HTML/CSS, JavaScript, Unity Engine, Machine Learning, Game Development, Full-Stack Web Development