

# Raj Verma

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## EDUCATION

**VIT Bhopal University (GPA = 8.97)**

*Bachelor of Technology, CSE-AIML*

Bhopal, Madhya Pradesh

*Sep. 2023 – Present*

**Pt. D.P. Mishra Memorial Public School(12th = 86.6%)**

*Intermediate and High School*

Kanpur, Uttar Pradesh

*June 2019 – June 2022*

## PROJECTS

**AgriSense – Smart Agriculture Assistant | *Python, scikit-learn, pandas, Jupyter, Flask*** *Mar. 2025*

- Built 2 ML models to recommend optimal crops (with 92% accuracy) and predict corn plant growth stages (MAE : 1.5 cm).
- Used 3+ classification and regression algorithms to analyze real-time sensor and historical agricultural data.
- Integrated models into a Flask-based web app for a fully functional demo during a 36-hour hackathon.
- Handled the ML pipeline including data preprocessing, feature selection, training, validation, and packaging.

**Virtual Mouse | *Python, OpenCV, MediaPipe, PyAutoGUI*** *Dec. 2024*

- Developed a Python-based virtual mouse system using **OpenCV**, **MediaPipe**, and **PyAutoGUI**.
- Captured real-time hand gestures at 30 FPS through webcam and mapped movements to screen coordinates.
- Implemented fingertip detection to enable cursor movement and clicking functionality.
- Achieved high accuracy in gesture recognition using computer vision.

**N.E.S.T – Neighbourhood Emergency & Safety Tool | *React, Tailwind CSS,, Matplotlib*** *Nov. 2024*

- Developed a full-stack community safety platform to manage emergency alerts, complaints, and feedback using React (frontend)
- Implemented features such as anonymous suggestion boxes, CCTV surveillance status, quiet hours policy, and emergency drill scheduling.
- Integrated APIs using Requests to automate data retrieval and Matplotlib for generating visual safety reports.
- Improved user engagement and safety awareness through intuitive UI and regular system-generated notifications.

## TECHNICAL SKILLS

**Languages:** Python, Java, HTML, CSS

**Developer Tools:** Git, Hugging Face, Google Colab, VS Code, PyCharm

**Libraries:** LLM, Lamma, SpeechRecognition, OpenCV, MediaPipe, pytsx3, scikit-learn

**Frameworks:** Flask, Firebase, FastAPI

## ACHIEVEMENTS

**HackMol 6.0 Hackathon @NIT Jalandhar:** Top 10 Finalist

**Leet Code:** 100 Days Badge

**Coding Challenge @VIT Bhopal:** Cleared Round 3 among 423+ students during placement drive screening.

## EXTRACURRICULAR

**Placement Coordinator | *PAT Team, VIT Bhopal*** *Oct. 2024 - Present*

- Selected as 1 of 16 coordinators to assist in placement operations for 450+ students.
- Helped manage Cognizant and TCS placement drives ensuring smooth logistics and communication.
- Coordinated with 10+ faculty and 35+ recruiters to streamline operations.

**Captain | *NCC Air Wing 3 UP SQN*** *2018-2020*

- Completed 8+ NCC camp within UP Level and selcted as one of two JD for finals
- Selected in BCC( Best Cedit Camp) for RDC( Republic Day Camp).
- Also Compete in IGC(Inter Group Camp) with all 3 wings of Armed Forces.