

# Darpan Nemade

Phone: +919356606402 | Email: [darpannemade2004@gmail.com](mailto:darpannemade2004@gmail.com) | [LinkedIn](#) | [GitHub](#)

## Education

---

### VIT Bhopal University

BTech

Computer Science Spec in Artificial Intelligence and Machine Learning.  
Cumulative CGPA: 8.64/10

Bhopal, Madhya Pradesh

Expected May 2026

### SREF

12<sup>th</sup> Standard (HSC): - 81%

Ahmednagar, Maharashtra

Jul 2022

### Yashshree Academy

10<sup>th</sup> Standard (CBSE): - 97%

Mar 2020

## Technical Skills

---

- **Programming:** Python, Java, HTML, CSS, JS
- **Data Analytics & Machine Learning:** Data Visualization, Supervised Learning, Classification, Regression, Ensemble Learning
- **Data Processing:** Data Cleaning, Data Transformation

## Projects

---

### Brain Tumor Classification System-

Hybrid ResNet-DenseNet based MRI Analysis . Developed a high-accuracy deep learning model for multi-class brain tumor detection (glioma, meningioma, pituitary) using hybrid **ResNet-DenseNet** architecture.

- Trained on preprocessed MRI datasets to identify and localize tumors with high precision
  - Achieved superior performance by combining feature reuse (DenseNet) with residual connections (ResNet)
  - Integrated Grad-CAM visualizations for explainability in medical diagnosis.
- 

### Thermal Surveillance System-

Built a real-time **thermal surveillance solution** combining **YOLOv8** and **Faster R-CNN** for dynamic object detection with 3D visualization in Unreal Engine.

- Captured live thermal video streams for human and object tracking in low-visibility environments.
  - Used socket programming to bridge Python-based detectors with UE5 rendering pipeline.
  - Applicable to defense, disaster response, and wildlife monitoring.
- 

### Social Media Caption Generator-

Engineered a neural network that generates natural-language captions from input images using a **CNN-LSTM** hybrid.

- Extracted image features using pre-trained VGG16/InceptionV3 CNNs.
  - Generated grammatically coherent and context-aware captions using LSTM decoder.
  - Useful for accessibility tools and auto-captioning in media applications.
- 

### Plant Disease Detection System-

Developed a deep learning system to detect diseases in various crops using **CNN-based transfer learning**.

- Leveraged models like MobileNet and ResNet50 for efficient classification on mobile/web.
  - Achieved high accuracy on PlantVillage dataset across 30+ disease classes.
  - Deployed using Flask API for real-time inference on user-uploaded leaf images.
-

## Full-Stack Music Streaming App-

Designed and implemented a Spotify-style music streaming app with real-time playback and user interactivity.

- Enabled secure user authentication and playlist management using JWT & MongoDB.
  - Built RESTful APIs to manage tracks, genres, and user data.
  - Used Web Audio API and sockets for seamless song streaming and control.
- 

## ODIN — AI-Powered NFT Marketplace with Smart Wallet Chatbot

Developed an intelligent NFT marketplace integrated with a signature-verified AI chatbot that executes blockchain actions.

- Built a Retrieval-Augmented Generation (RAG) chatbot that handles wallet-linked queries like "buy NFT", "send ETH", and crypto FAQs.
- Powered by multi-model LLaMA (OpenRouter/local) with real-time context injection (memory, wallet info, ETH balance).
- Implemented secure wallet verification using EIP-191 signature flow via MetaMask.
- Created full-stack smart contract interactions (minting, listing, transfer) using Solidity and Web3.
- Deployed NFT admin panel, suggestion engine, sentiment-aware responses, and follow-up prompts.

## Certification & Training

---

- Generative AI course - IBM
- Fullstack Web Development using mongo DB - SmartInternz

## Extracurricular

---

### Maharashtra Club

VIT Bhopal

### Member

Jan 2023 – May 2025

- Served as a event management committee member in several club events.

## Languages

---

- **Fluent:** Hindi, English, Marathi
- **Conversational Proficiency:** Hindi, English, Marathi