

# Keshav Patidar

Bhopal, MP | +91 7041891383 | keshavbp.05@gmail.com | keshav.23bai10236@vitbhopal.ac.in

LinkedIn | GitHub | Portfolio

## OBJECTIVE

3rd-year B.Tech Computer Science student specializing in **AI & Machine Learning** at VIT Bhopal. Expert in implementing State-of-the-Art (SOTA) architectures like **YOLOv10**, **CSRNet**, and **Generative Models**. Proven technical lead specializing in **end-to-end model preparation and optimization**. Seeking an AI/ML engineering role or research internship to solve complex vision and predictive challenges.

## EDUCATION

### VIT Bhopal University

Bachelor of Technology in Computer Science & Engineering (Spec. AI & ML)

Bhopal, MP

August 2023 – Present

– **CGPA:** [Insert CGPA] / 10.0

– **Coursework:** Data Structures & Algorithms, Neural Networks, Computer Vision, Cloud Computing (AWS), DBMS, Web Development.

## TECHNICAL SKILLS

**Languages:** Python (Expert), Java (Intermediate), C++, JavaScript, TypeScript, SQL, HTML/CSS,  $\LaTeX$

**AI / Machine Learning:** YOLOv10/v8, PyTorch, TensorFlow, GANs, CSRNet, MediaPipe, Scikit-learn, XGBoost, Random Forest, LSTM architectures

**Data Science & Analytics:** Data Preprocessing, Feature Extraction, Time-Series Analysis, Predictive Modeling, Pandas, NumPy, Matplotlib, Seaborn

**Web Development:** React, Node.js, React Native, Tailwind CSS, Socket.io, FastAPI, Flask UI integration

**Cloud & Infrastructure:** AWS (EC2, S3, IAM), Firebase, PostgreSQL, Docker, Git/GitHub, Linux environments, Vercel, Overleaf, VS Code

## PROJECTS

### Smart Traffic Analysis System (YOLOv10) | Model Prep Lead

March 2025

- Developed an automated vehicle monitoring system for the **SOLVIT Hackathon**, advancing through 3 elimination rounds to secure **3rd place among 150+ teams**.
- Implemented **YOLOv10** for real-time object detection and engineered density classification logic for automated urban traffic management.

### Anime Face Synthesis Platform (DCGAN) | PyTorch, Flask, Computer Vision

Jan 2025

- Developed a 5-layer DCGAN in **PyTorch** to synthesize unique anime character faces from 100-D latent Gaussian vectors.
- Built a **Flask REST API** featuring dynamic inference and in-memory Base64 JSON streaming to eliminate server-side storage overhead.
- Engineered data pipelines using **NumPy** and **Pillow** with a **LANCZOS filter** for  $64 \times 64$  to  $512 \times 512$  upscaling and automated **NVIDIA CUDA/CPU** hardware provisioning.

### Project Aura: AI Chronic Disease Management | FastAPI, Random Forest, LSTM

March 2026

- Developed an end-to-end AI platform for chronic disease management, integrating hybrid models (Random Forest & LSTM) for predictive health analytics.
- Built a scalable **FastAPI** backend to handle real-time dataset ingestion and high-concurrency model inference requests.

### Crowd Management Project | PyTorch, CSRNet

Nov 2024 – April 2025

- Designed a Multi-Branch CNN (CSRNet) to estimate crowd density via Gaussian kernel-based density estimation for urban safety applications.
- Analyzed spatial distribution patterns across dense environments to handle varied head scales and perspective distortions.
- Collaborated on a 6-member research team to draft technical documentation and paper drafts for submission.

### Near-Earth Object (NEO) Hazard Classifier | Scikit-learn, XGBoost

July 2024

- Engineered a binary classification model to detect hazardous asteroids using NASA JPL orbital parameters, achieving high sensitivity for rare-class event detection.
- Applied Random Forest and XGBoost with automated feature scaling to improve prediction accuracy for hazardous NEO identification.

## ACHIEVEMENTS & LEADERSHIP

- **3rd Position:** SOLVIT University Hackathon, VIT Bhopal (2025) - Finalist among 150+ teams, recognized for automated vision-based traffic solutions.
- **State Runner-Up:** Gujarat State-Level STEM Quiz (2023) - Recognized for analytical and scientific aptitude in a competitive state circuit.
- **Technical Model Lead:** Led the model training and data engineering phase for a 6-member team during high-pressure competition environments.

## CERTIFICATIONS

---

- **Google IT Support Professional Certificate** – Grow with Google
- **Applied Data Science with Python Specialization** – University of Michigan via Coursera
- **AI For Everyone** – DeepLearning.AI via Coursera