

Satyam Patel

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SUMMARY

AI/ML Developer skilled in computer vision, agentic AI, and optimization, with hands-on experience in deploying scalable ML solutions using FastAPI, React, and cloud platforms (AWS/GCP). Adept at cross-functional collaboration, problem-solving, and applying research-driven AI to real-world industry use cases.

WORK EXPERIENCE

Research Intern — AI & Computer Vision Jan 2025 – June 2025
Indian Institute of Technology (IIT) BHU

- Optimized UAV–IRS pairing using a Genetic Algorithm, improving energy efficiency by **40%**.
- Developed an AI-powered BPPV therapy guide with **real-time head pose tracking**, voice feedback, and error correction.

[Internship Certificate](#)

PROJECTS

UPSC Essay Checker using LLM [GitHub Link](#)

Developed an AI-powered essay evaluation system using **Google’s Generative AI** and **LangGraph**. The tool automatically assesses **language quality, clarity of thought, and depth of analysis**, provides detailed feedback, and computes an **overall score**, enabling structured and efficient essay evaluation.

UAV–IRS Optimization using Genetic Algorithm [GitHub Link](#)

Developed a **Genetic Algorithm (GA)-based Python framework** for UAV–IRS and base station pairing. Achieved a **40% boost in energy efficiency** compared to Random Search, Hill Climb, and Random Angle methods by refining GA constraints and search heuristics.

EDUCATION

2022 - present	B.Tech(Hons) CSE(Data Science) at UTD-CSVTU,Bhilai	(GPA: 8.3/10.0)
2021	Class 12th CBSE Board	71.2%
2019	Class 10th CBSE Board	70%

SKILLS

Programming Languages	Python, C++
Machine Learning & AI Frameworks	TensorFlow, PyTorch, Keras, scikit-learn, OpenCV
Large Language Models & RAG	LangChain, LlamaIndex, Hugging Face, Claude, Retrieval-Augmented Generation (RAG), Embedding Models, LL-MOps
Computer Vision & Deep Learning	CNNs, RNNs, Transformers, Object Detection, Image Processing, NLP
Data & Cloud Tools	Data Analysis, Data Management, AWS
Other Skills	Problem Solving, Analytical Thinking, Structured Workflow Design