

Kartavya Suryawanshi

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EDUCATION

Indian Institute of Technology, Mandi

B.Tech in Data Science

Aug 2023 – Present

CGPA: 9.32

- **Key Courses:** Data Structures & Algorithms, Machine Learning, Mathematical Foundations of DS, Computer Organization, Data Visualization

SKILLS

- **Languages:** Python, C, C++, JavaScript, HTML/CSS, LaTeX
- **Frameworks:** Django, FastAPI, Node.js, Streamlit, LangChain, LangGraph
- **ML/DL:** PyTorch, TensorFlow, Scikit-learn, Transformers, CNNs, Autoencoders, Diffusion Models, Kubernetes
- **Tools:** Git, VS Code, Docker, Anaconda, Colab, Hugging Face, OpenCV, Pandas, NumPy

WORK EXPERIENCE

Finance Office – Indian Institute of Technology Mandi [LOR]

May 2025 – Nov 2025

Software Developer, Finance Digitization Project

Mandi, India

- Digitized PDA reimbursements and approvals, replacing paper-based workflows with a full online pipeline.
- Cut average bill-processing time by **35–40%** using automated routing, status tracking, and DB-backed logs.
- Implemented role-based access and secure deployment, improving data reliability and compliance by **50%**.

PROJECTS

Smart Scribes – Multimodal Lecture Intelligence [GitHub]

- *Next.js, TypeScript, Tailwind, Python, Supabase, Multimodal ML* 2025
- Built an AI platform that fuses video/audio/PDF inputs to auto-generate summaries, topics, and Q&A, increasing content navigability by **55%**.
- Developed multimodal embedding pipelines improving semantic alignment accuracy by **48%**.

Lunar DEM Generation via Photoclinometry [GitHub]

- *Python, OpenCV, GIS, ML, NASA Lunar Imagery* 2025
- Generated high-resolution Digital Elevation Models by processing NASA imagery, sharpening elevation gradients by **30–40%**.
- Enhanced lunar surface feature detection supporting astronomy research and exploration mapping.

IIT Mandi Integrated Finance Management Portal

- *Next.js, Supabase PostgreSQL, LDAP Auth, Vercel* 2025
- Digitized PDA reimbursements and audits through role-based routing and approval workflows, cutting processing time by **35–40%**.
- Implemented QR-tagged assets enabling instant audit retrieval, reducing verification from minutes to **seconds**.

AWARDS & CERTIFICATIONS

- **Winner – NASA Space Apps Challenge (2025):** 1st place for AI-driven lunar exploration solution.
- **Winner – iHub Multimodal AI Hackathon (2025):** 1st place among 1,600+ teams (80,000+ students).
- **Competitive Programming:** Solved 500+ problems across LeetCode, Codeforces, and HackerRank.

VOLUNTEERING & LEADERSHIP

- **Core Member, Programming Club:** Conducted ML workshops, coding contests, and peer mentoring.
- **Core Member, STAC – Space Tech & Astronomy Cell:** Coordinated research and outreach initiatives.
- **Web Dev Member, Exodia:** Built registration and scheduling modules for IIT Mandi's tech fest.
- **NSS Volunteer:** Led tree plantation and blood donation drives.