

Vinamra Garg

Yamunanagar, Haryana

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EDUCATION

Indian Institute of Technology, Mandi

Bachelor of Technology - Computer Science and Engineering

August 2023 – June 2027

CGPA: 9.16 (Till End Of 4th Semester)

- **Relevant Courses:** Data Structures and Algorithms, Design of Algorithms, Probability and Statistics, Machine Learning, Computer Organisation, Mathematical Foundations of Computer Science, Formal Languages and Automata Theory, Deep Learning, Information Security and Privacy, Information and Database Systems

Swami Vivekanand Public School, Yamunanagar

Class X: 99.6% Class XII: 95.6%

2023

PROJECTS

MatBot - AI Troubleshooter for MatLab | RAG, Streamlit, LangChain, easyOCR, LLM

[GitHub](#)

- Built an RAG-based chatbot to resolve MATLAB errors, queries, and screenshots using easyOCR
- Handled illicit queries safely and ensured fast, context-aware troubleshooting
- Trained on MATLAB documentation with auto-linked suggestions, improving resolution accuracy

Indian Climate Information Explorer (HIMPACT Lab) | React.js, Django, Three.js, Leaflet incline.iitmandi.ac.in

- Developed a 3D animated landing page and integrated real-time climate data analysis to boost user engagement
- Engineered a 4-module climate analytics platform for government use, focused on usability and actionable insights
- Enabled data downloads and interactive graph visualizations, reducing data loading time by 25%

NASA Space Apps Challenge | Next.js, Flask, Folium, Tailwind CSS, API

[GitHub](#)

- Architected an ML platform to predict CO2/CH4 emissions using 200K+ data points
- Top 40 globally; achieved 95% R² using Random Forest on ODIAC, EDGAR, MiCASA, and World Bank datasets
- Visualized data with Folium heatmaps and added Gemini API to auto-generate policy suggestions

Deepfake Video Detection | PyTorch, Enhanced Contrastive Learning, Python

[GitHub](#)

- Implemented an unsupervised deepfake detector using enhanced contrastive learning and CNN-based architecture
- Replaced XceptionNet with M2TR, used SOTA face extractors, and visualized feature clusters using t-SNE and plotly
- Matched author results using 5 times fewer epochs and got 4% more accuracy on FF++ dataset as compared to average

TECHNICAL SKILLS

Languages: C, C++, Python, JavaScript, TypeScript, HTML, CSS, Shell Scripting, SQL

Frameworks: React.js, Next.js, Node.js, Express.js, Django, Flask, Streamlit, Three.js, Tailwind CSS

AI/ML & Data Tools: TensorFlow, PyTorch, Scikit-learn, XGBoost, Pandas, NumPy, Matplotlib, OpenCV, NLP, RAG, Transformers, CNNs, GANs, Diffusion Models, VAE, ResNet

Tools: GitHub, VS Code, Docker, Linux, Firebase, MongoDB, PostgreSQL, Figma

ACHIEVEMENTS

- Awarded Academic Excellence by Honourable Defence Minister Rajnath Singh.
- Top 40 finalist from over 9,000 worldwide submissions in NASA Space Apps Challenge 2024
- 5th position in ISRO High Prep problem, Inter-IIT Tech Meet 2024.
- Represented IIT Mandi in Lawn Tennis at Inter-IIT Sports Meet 2023.
- Recipient of Haryana Science Talent Search Scheme (HsTSSc) Scholarship 2021.
- Rated 1175 on [Codeforces](#), 1488 on [CodeChef](#), and 50-day badge'25 holder on [LeetCode](#).

POSITIONS OF RESPONSIBILITY

- **Developer, Google Developer Group (GDG)**

Built the official [website](#) and conducted events/workshops to promote developer culture.

- **Mentor, Guidance and Counselling Service (GCS), IIT Mandi**

Mentored 25+ first-year students and led well-being initiatives to foster a supportive environment.

- **Coordinator, Capture The Flag (Rahasyam'24)**

Led IIT Mandi's flagship cybersecurity event; managed challenge design, logistics, and a 500 participant crowd.

- **Finance Head, Utkarsh (Tech Fest), SnTC, IIT Mandi**

Oversaw budgeting, sponsorship outreach, and managed finances exceeding rupees 1 lakh.