

Luv Sharma

[Linkedin](#) [Github](#) [LeetCode](#) [Codeforces](#)

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EDUCATION

- **Indian Institute of Technology, Mandi** Himachal Pradesh, India
B.Tech in Computer Science; CGPA: 8.68 *Nov 2022 - Present*
 - **Relevant Coursework:** Data Structures and Algorithms, Design of Algorithms, Mathematical Foundation of Computer Science, Data Science I, II, III, Deep Learning and Applications

EXPERIENCE

- **LibreOffice** Gerrit
Open Source Developer *Jan 2024 - May 2024*
 - **Contributions:** 16 merged pull requests in LibreOffice, while working with C++ and Java.
 - **Writer's Basic Macros:** Resolved compiler directive issue in LibreOffice basic macros, enabling smooth implementation inside and outside procedures.

PROGRAMMING SKILLS

- **Languages:** Python, Javascript, C++, HTML, CSS
- **Technologies/Frameworks:** React.js, Vue.js, Next.js, Node.js, Express, FastAPI, Tailwind, REST API, MongoDB, Firebase, Pytorch, TensorFlow
- **Tools:** VSCode, Linux, Git, Github, Docker

PROJECTS

- **Inter IIT Tech Meet 13.0 - Pathway Legal Navigator** Github
Pathway, Microsoft Guidance AI, DiskANN, Python, Streamlit
 - **AI Legal Navigator:** Developed an Agentic RAG system tailored for legal case analysis and precedent retrieval.
 - **Precedent Mapping:** Leveraged Pathway's vector store & Indian Kanoon API for precise case mapping.
 - **Legal Workflow Optimization:** Enhanced processing of large legal documents using DiskANN and improving computational efficiency using Microsoft Guidance AI for agent orchestration, reducing API token usage.
- **AlgoViz - Data Structures & Algorithms - Machine Learning Visualizer** Link Github
React, Tailwind CSS, FastAPI, Sklearn
 - **Interactive Learning:** Merged data structures and ML algorithms, boosting user comprehension by 20%.
 - **Visualizations:** Sorting techniques and ML models with clear visualizations, garnering 95% positive feedback.
 - **Heaps Visualization:** Created heap visualization, enhancing the concept retention by 30%.
- **OPDx - Patient Medical History Aware Assistant** Github
Python, PyTorch, Streamlit, Langchain, FastAPI
 - **LLM Tuning:** Fine-tuned MedLLaMA2 on 10,000 Medical Conversations using QLoRA on a single RTX 3090.
 - **Multimodal RAG:** Built a Streamlit chatbot integrating the fine-tuned MedLLaMA2 and Microsoft's LLaVa.
- **Viz Assist** Github
Python, FastAPI, Pytorch, Flutter, Google Translate
 - **Ensemble Model:** Integrated ViT+GPT-2 with Microsoft's LLaVA for scene captions & image-based chat.
 - **Inclusive Flutter App:** Implemented with a Fast API backend, incorporating gesture navigation, Text-to-Speech, and Speech-to-Text capabilities to enhance user engagement by 40%.
 - **Multilingual Interface:** Enabled Japanese, English, and Hindi for a seamless user experience.

ACHIEVEMENTS

- Achieved 18th rank out of 2400+ teams in the Amazon ML Challenge 2024, fine-tuning MoonDream2 VLM.
- Won KrackHack'24-Intra College Hackathon organized by Google Developer Students Club, IIT Mandi.
- Secured 3rd position in a stock price prediction competition Mine The Model—Celesta 2023 hosted by IIT Patna.
- Secured 3rd place at Yamaha AI Hackathon 3.0, showcasing backend development and deep learning expertise.

VOLUNTEERING AND PORs

- **Head Organizer, Frost Hack 2024:** Led a technical hackathon at IIT Mandi with 30 teams participating
- **Web Developer:** Programming Club, Designauts Club and MTB Club IIT-Mandi