



Harsh Upadhyay

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Professional Summary

Final-year AIML student with a strong foundation in development and a growing specialization in AI and ML. Started with web development and progressed into building intelligent systems, with a focus on real-world applications like LLMs and Computer Vision. Interested in contributing to innovative projects that combine software engineering and machine learning?

Education

Chandigarh University , B.E in CSE (AI & ML), Mohali, Punjab	2022 – 2026
• CGPA: 8.15/10	
Rani Laxmi Bai Sr. Sec. School , Intermediate (CBSE), Lucknow, Uttar Pradesh	2020 – 2022
• Percentage: 83%	
St Basil School , High School (ICSE), Basti, Uttar Pradesh	2020
• Percentage: 89%	

Publications

Enhancing YOLO with Rotated Bounding Boxes and ResNet50 Backbone for Orientation-Aware Object Detection May 2025

Harsh Upadhyay, Upasana Tiwari, Jahanvi Rana, Hemant Kulhari, Vishal Sarmah *Presented at the International Conference on Data Science and Artificial Intelligence (Under Review)* Submission ID: 1393

Projects

Legal Document Analyzer

- Developed a full-stack legal document analysis system using Flask and React.
- Fine-tuned `allenai/led-base-16384` for summarization and `t5-base` for legal QA & deployed on Hugging Face.
- Improved ROUGE-1/2 scores by 40% + over the base LED model by fine-tuning the domain-specific summarization.
- Built NLP modules for clause detection, citation parsing, and party/timeline extraction.
- Implemented secure JWT APIs and interactive dashboards with document comparison and QA interface.
- Optimized performance using caching, batching, and async processing; deployed in cloud dev environment.

Blog Website Project

- Developed a responsive blogging platform that focused on an intuitive user experience and real-time interaction.
- Integrated Firebase Authentication with support for both custom email/password and Google OAuth login.
- Implemented secure user sessions, enabling the creation, editing, and deletion of blog posts.
- Designed the interface to display the latest posts at the top, improving content visibility and user engagement.
- Ensured session safety through logout handling and protected routes.

Skills

Languages: Python, C++, JavaScript, SQL.

Frameworks & Libraries: Flask, PyTorch, TensorFlow, Open CV, Hugging Face, React, NextJS, Express, Tailwind CSS.

Tools: Git, GitHub, Docker, Netlify, Google Colab, Firebase.