Ayush Rawat

rawatayush905@gmail| +91 70882 10944
GitHub | Linkdein | Leetcode

Education

Uttaranchal University — Dehradun
Bachelor of Technology (B.Tech) in Computer Science & Engineering — 2022-2026
GPA: 8.23

Experience

Intern
IIT Kharagpur — Kharagpur, July 2025

- Led development of a YOLO-based accident-detection system, achieving 92%+ real-time detection accuracy and reducing false positives by ~18% through improved preprocessing and model tuning.
- Built an interactive analytics dashboard (Node.js, HTML/CSS, Python) that reduced incident-review time by 35%, improving visualization clarity and usability for cross-functional teams.
- Implemented automated model-training workflows and integrated backend services with the dashboard, enabling 100% seamless data flow and improving inference pipeline stability by 30%.
- Optimized preprocessing, training, and deployment pipelines, cutting inference latency by 40 ms and improving model reliability and scalability for continuous real-time monitoring.

Projects

YouTube Video Downloader

- Built a Python-based downloader (Flask/Tkinter/yt-dlp/FFmpeg) enabling high-quality 1080p/4K video/audio extraction with 40% faster conversion.
- Engineered multi-format conversion logic (MP4/MP3) reducing processing failures by 25% using optimized FFmpeg pipelines.
- Integrated a responsive GUI + web interface improving user interaction speed and task completion by ~30%.

Hospital Management System

- Developed a Java/C++ OOP-based hospital management system supporting 1000+ patient, doctor, and appointment records.
- Implemented persistent file-based storage architecture achieving 25% faster data retrieval across core operations.
- Designed validated workflows for registration, scheduling, and billing reducing operational errors by ~40%.

Vision Tranformer

- Implemented a TensorFlow-based Vision Transformer achieving ~86% accuracy and outperforming a baseline CNN by 6–8%.
- Preprocessed and augmented 50k+ CIFAR-10 images improving training stability and generalization by 15%.
- Optimized attention architecture and hyperparameters reducing overfitting by ~12% through regularization tuning.

Certification

Microsoft Certified: Azure AI Fundamentals — (June 2023)

- **Description**: Completed Microsoft Azure AI Fundamentals certification, gaining knowledge of AI concepts, machine learning, computer vision, natural language processing, and responsible AI practices on Azure.
- **Technologies Used**: Microsoft Azure AI, Computer Vision APIs, NLP services, Responsible AI tools.

Microsoft Azure AI Fundamentals(ICT-Academy Infosys) — (August 2025)

- **Description**: Completed foundational training in Azure AI services, covering machine learning concepts, computer vision, natural language processing, and responsible AI principles.
- **Technologies Used**:Microsoft Azure AI Services (Cognitive Services, Azure Machine Learning, Azure Bot Service), Python/REST APIs.

Additional

Technical Skills: JavaScript, Python, Go, React, Express, Django, Java, C/C++, DSA, Sql.
Academic Achievements : Technical Training at Hit Bulls Eye(Java) and Slog Solution Pvt Ltd(C++).