

KUNAL ARORA

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EDUCATION

UPES Dehradun, India, CGPA: 8

B.Tech. in Computer Science, Specialization - AI & ML

Jul 2022 - Present

TECHNICAL SKILLS

- **Programming Languages:** Python, SQL, Bash
- **Data/EDA:** NumPy, pandas, Matplotlib, Seaborn, Parquet/CSV workflows
- **Frameworks:** PyTorch, TensorFlow, Keras, scikit-learn, Matplotlib, Seaborn, OpenCV, LangChain
- **Versioning & Ops:** Git, GitHub Actions, Conda, Ubuntu/Linux

EXPERIENCE

Foton Labs, Los Angeles

AI & ML Engineer

Oct 2025 – Present

- Worked on **project GRACE**, a lifelike, interactive AI companion that users can talk to naturally through voice or video, while experiencing real-time 3D visuals
- **Optimized prompt architecture** to enhance response relevance, contextual coherence, and user interaction quality.
- **Automated backend server workflows**, integrating deployment scripts and health checks for improved system reliability and scalability.
- **Reduced cold-start time** by optimizing model initialization and caching strategies across **edge nodes**.
- Minimized latency using edge functions and distributed execution to achieve near real-time conversational performance

Binary Keeda, Dehradun

AI & ML Intern

Aug 2025 – Present

- Built an LLM-powered interview system that analyzes resumes and job descriptions to auto-generate personalized question sets with adaptive follow-ups.
- Developed a **rubric-based grading engine** (JSON scores + feedback) and integrated integrity checks—**eye-tracking** (OpenCV) and **AI-plagiarism detection** via embeddings—to enhance fairness and efficiency.
- Optimized **prompt design** and model selection (GPT-4, Claude, Llama-3) for quality, latency, and cost per-interview.

SNet Labs, Noida

AI & ML Intern

Jun 2025 – Jul 2025

- Researched and benchmarked foundation models (RTMDetr, DINOV2, SoundStorm) for real-time edge deployment.
- Delivered 7 vision plug-ins—**Drowsiness, Sign-Language, Pothole, ANPR, Queue, Flame/Smoke, Smart-Fence**—for an in-house virtual monitoring system.
- Optimized training and inference via **quantization and ONNX/OpenVINO** on Ubuntu GPUs.
- Streamlined dataset QA with CVAT and refined labeling standards for higher model reliability

PROJECTS

LLM-based Interactive Interview System (Python | LangChain | OpenAI API)

Aug 2025 - Sep 2025

- Automated pipeline to parse JD/Resumes, generate rubrics, and ask **competency-based interview questions**.
- Implemented strict **JSON grading** with score, band, justification, and follow-up question storage.
- Modular methodology: evidence extraction → rubric design → question generation → grading → evaluation storage.

DINOV3 MRI Brain Tumor Diagnosis (PyTorch | Hugging Face Transformers | OpenCV)

Jul 2025 - Aug 2025

- **Results: 98% test accuracy** (4-class diagnosis) and **Dice = 0.87 / IoU = 0.78** for tumor masks on BRISC2025.
- Built an end-to-end pipeline (data prep → training → eval) using **DINOV3** with lightweight heads; optimized for GPU training and quick CPU debug; automated slice/mask QC to reduce wasted compute.

Multimodal Cloud-Native RAG Chatbot (LangChain | LLM | Streamlit)

Jun 2025 – Jul 2025

- Built a retrieval-augmented assistant using **GROQ Llama-3.3-70B** with a StreamLit chat UI that accepts **text, images(BLIP), and voice**(Whisper STT + TTS) with responses **under 1s**.

RESEARCH EXPERIENCE

DINOV3-based Brain Tumor Analysis (Under Review — IEEE): Domain-adaptive ViT (LoRA) with a classification and segmentation head that outputs pixel-level masks highlighting tumor regions; cross-dataset validation (BRISC-2025, BraTS) with Dice/HD95 benchmarking.

CERTIFICATIONS & EXTRACURRICULAR ACTIVITIES

1. **Google Cloud Skills Boost 29 skill badges – Diamond League (19,835 pts)** [link](#)
2. Completed a project-based internship from **NASSCOM** applying real-world AI/ML techniques and learning Generative AI, culminating in an official certification. [link](#)
3. **Oracle Cloud Infrastructure 2025 Certified Generative AI Professional.** [link](#)
4. **Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate.** [link](#)