Devansh Gupta

AI Engineer | Computer Vision | VLM | LLM | Medical Imaging
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Professional Summary

AI Engineer with 2+ years of experience in Vision-Language Models, Computer Vision, LLMs and medical imaging problems (1 year full-time and 1+ year in research). Built end-to-end solutions including training and deploying OCR models and a reward system for automated grading of answer sheets, alongside research in handwritten OCR, keypoint detection in medical imaging and deep learning models for signal processing. Skilled in VLM and LLM fine-tuning, scalable GPU deployments (vLLM) and full-stack AI products.

Technical Skills

AI/ML: Computer Vision, OCR, Layout Parsing, LLMs, RAG, VLM/LLM Fine-tuning (SFT, RFT, GRPO), Explainable AI
Current Research: Handwritten OCR, Keypoint Detection across domains (document and medical imaging)

Work Experience

AI Engineer | **Infutrix Technology** *Jun 2025 – Present | Mohali, India*

- Leading research on handwritten OCR and a reward-based grading system; trained a **Qwen 3.5 9B** model to perform handwritten OCR, map each answer to its question and assign rewards for scoring.
- Researched character-level keypoint detection and space detection on line-level handwritten data.
- Built an end-to-end answer sheet grading platform using CV–LLM pipelines with rubric-aware partial-credit grading, explainable AI feedback, and monitoring and prediction of per-sheet processing cost.
- Collaborated with an **IIT Delhi** professor on research for layouting answer text types and mapping them to their questions.
- Handled on-ground operations at CCS University and scaled model deployment to process **500K sheets in 3 weeks**.

Visiting Scholar, Medical Imaging | **Indian Institute of Technology, Ropar** *Jan 2025 – Jun 2025 | Punjab, India*

- Airway segmentation for diagnosis: segmented airway structures to detect conditions such as adenoid hypertrophy, a key indicator of upper-airway obstruction.
- Morphological and volumetric analysis: assessed upper-airway shape and volume to evaluate obstruction severity.
- Currently working on keypoint detection in lateral cephalometric (Lat Ceph) radiographs, experimenting with new methods.

SRIP Intern | **IITRAM** *May 2024 – Jul 2024 | Ahmedabad, India*

- Conducted research on PPG signals to develop deep learning methods for monitoring sleep disorders.
- Created a CNN-based model for classifying sleep disorders using PPG signals, achieving **95.73% accuracy** across 6 sleep disorders.
- Research published in *Engineering Applications of Artificial Intelligence* (EAAI) journal.

Education

B.E. in Information Technology — **UIET, Panjab University** | CGPA: 8.52 *2021 – 2025 | Chandigarh, India*

Projects

Research OS | *SvelteKit, Supabase, Cloudflare Workers, AI* *GitHub*

- Built an AI-assisted research paper reader with problem-based organization and highlight-to-note capture.
- Added a spaced-repetition review system and an AI daily loop for reading prep and memory consolidation.

Low-Resource Punjabi ASR Across Age Groups | *Python, Wav2Vec2, ASR, Speech Processing* *GitHub*

- Trained wav2vec2-based ASR models across age cohorts for low-resource Punjabi speech recognition, achieving a **Word Error Rate of 0.17**.

Publications

- **Automated detection of sleep disorders using wavelet scattering and CNN models with PPG** — *Engineering Applications of Artificial Intelligence*, 2026.

Achievements

- **Secured 9th position** in the ICDAR 2026 Conference Competition on Multilingual Medieval Handwriting Recognition — training system description.