Shravan Shenoy

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PROFESSIONAL SUMMARY

• MS in Computer Science student specializing in computer vision and vision-language models. Experienced in training, evaluating, and optimizing deep learning models for real-time performance using PyTorch and TensorRT. Passionate about building production-grade document intelligence and multimodal AI systems, demonstrated through hands-on projects in OCR and semantic search.

PROFESSIONAL EXPERIENCE

USC Dynamic Robots and Controls Laboratory

March 2025 – Present | Los Angeles, CA

- Engineered a real-time vision-language segmentation pipeline using SAM2 and OWL-ViT for robust object tracking, directly applicable to complex layout understanding.
- Optimized model inference for edge deployment using TensorRT and ONNX, achieving a stable 20 Hz loop through encoder distillation and quantization-aware techniques.
- Systematically benchmarked segmentation models (e.g., MobileSAM, FastSAM) on GPU hardware to evaluate the trade-off between mask accuracy and inference latency for production viability.
- Developed a modular evaluation and active learning pipeline with post-processing (Kalman Filters) to improve cross-frame stability and mitigate model drift.

Netradyne Technologies

February 2024 – November 2024 | Bangalore, India

- Developed an automated ML-driven diagnostics tool for 10,000+ edge devices, reducing manual log analysis and QA time by over 40%.
- Designed a proof-of-concept for an LLM-based root cause analysis system to automatically classify fleet-wide failure modes from heterogeneous log and system utility data.
- Built and deployed scalable Python data pipelines on AWS (S3, EC2) to support the monitoring tool, improving device uptime and release cycle efficiency.

EDUCATION

Master of Science, Computer Science - University of Southern California

January 2025 – December 2026 | Los Angeles, CA

- GPA: 3.76/4.00

• Relevant Coursework: Advanced Computer Vision, Information Retrieval & Search Engines, Database Systems

Bachelor of Engineering, Computer Science - R. V. College of Engineering

August 2020 – May 2024 | Bangalore, India

• GPA: 9.05/10.00

TECHNICAL SKILLS

• Languages: Python, C++

• ML Frameworks: PyTorch, TensorFlow, Scikit-learn, JAX (familiarity)

• Model Optimization: TensorRT, ONNX, CUDA, Quantization, GPU Acceleration

• Core ML: Computer Vision, Vision-Language Models (SAM, ViT), NLP, LLMs, Transformer Architectures

• Tools & Data: AWS, SQL, Pandas, OpenCV, Git, Jenkins

PROJECTS

Personal Recruiter Q/A Chatbot (Document Intelligence)

• Built a document intelligence system for multi-format ingestion (PDF, DOCX, images+OCR) to create a searchable knowledge base from unstructured professional records.

• Implemented semantic search using vector embeddings (ChromaDB) and integrated a Google Gemini-based Q&A; interface for natural language querying and information extraction.

• Demonstrates a direct interest and hands-on capability in building vision-language pipelines for document understanding.

Lung Cancer Metastasis Prediction

• Deployed an ensemble learning system (Random Forest, Gradient Boosting) to predict cancer metastasis from the SEER dataset (~100k patient records).

• Achieved 93.66% metastasis detection accuracy by engineering features from structured and unstructured textual clinical data, showcasing experience with noisy, real-world text.

ACHIEVEMENTS & AWARDS

• Showcased founding experience by developing a business plan for Ashwa Racing, an automotive EdTech venture.

• Co-authored and published research on vision-based robotics in the peer-reviewed journal, Robotica (2025).

• Placed 1st overall in the ICRA Metrics Adapt Challenge 2023, a global robotics and computer vision competition.