Vikhram S

https://vikhram.me

Contact

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Research Interests

I work on multi-modal AI systems with a focus on vision–language models, explainable AI, and hybrid system design. My work emphasizes building interpretable and deployable AI systems and exploring their extension toward scientific and domain-specific intelligence workflows.

AI Systems Experience

ExplainableVLM-Rad: Multi-Modal Scientific Reasoning System

- Designed a multi-stage vision–language AI system integrating ViT (perception) and BioGPT (semantic reasoning)
- Built structured clinical report generation pipeline (findings, impressions) from radiological images
- Implemented explainability mechanisms (attention maps, gradient-based saliency) for traceable reasoning
- Developed confidence-aware inference for reliability estimation in generated outputs
- Deployed full inference pipeline on Hugging Face with reproducible and modular architecture
- Explored extensibility toward Retrieval-Augmented Generation (RAG) and hybrid neuro-symbolic systems for scientific workflows

IndianConstitution: NLP System for Legal Text Intelligence

- Built a retrieval-based NLP system for querying Indian Constitution documents
- Designed semantic search and text processing pipelines for structured legal information access
- Achieved 24K+ downloads on PyPI, demonstrating real-world usage and adoption
- Explored retrieval-augmented architectures for domain-specific knowledge systems

Publications

Conference: Explainable SLM-Guided Vision–Language Model for Multi-Class Skin Lesion Recognition
ICICC 2026, Springer LNNS (Presented)
Book Chapter: NariRaksha: Gender-Responsive AI for Women's Safety
India AI Impact Summit 2026 (MeitY + UN Women)

Technical Skills

Programming: Python
AI Systems & LLM Stack: Transformers, Hugging Face, LangChain, LlamaIndex; prompt engineering, RAG pipelines
Multi-Modal & NLP: Vision–Language Models (ViT + LLM integration), biomedical NLP, structured text generation
Machine Learning & Deep Learning: PyTorch, TensorFlow, model training, fine-tuning, evaluation
Systems & Deployment: Hugging Face model deployment, inference pipelines, modular system design
Data & Computation: NumPy, Pandas, OpenCV

Achievements

India AI Impact Summit 2026 (MeitY + UN Women)
Lead author of published case study on AI for Gender and Climate, presented as part of a national-level policy initiative
Received official hardcopy recognition from UN Women; work featured alongside contributions from researchers and policy experts
Selected contributor at a national AI platform (MeitY + UN Women), representing early-stage AI research engagement at the undergraduate level

Leadership

Advisor – Machine Learning Tech Society
Led design and delivery of advanced workshops on AI Agents, Quantum ML, and Open Source systems, impacting 180+ students
Developed hands-on learning modules focused on real-world AI system building (multi-modal pipelines, deployment, and tooling)
Mentored student teams on end-to-end ML system development, from problem formulation to deployment-ready solutions
Initiated a collaborative ecosystem for peer-driven AI projects and experimentation within the community
Promoted a systems-oriented approach to AI, emphasizing architecture design, reproducibility, and applied research thinking

Education

Saveetha Engineering College, India
B.E., Electronics and Communication Engineering 2026
CGPA: 8.0 / 10

Maharishi Vidya Mandir H.S. School, Karaikudi, India
Higher Secondary (HSE) 2022
Score: 88.33%
Secondary (Class 10) 2020
Score: 89%