

Shrinkhla Pandey

+91 7652054939 | shrinkhlapandey.work@gmail.com | [LinkedIn](#) | [GitHub](#)

EDUCATION

Vellore Institute of Technology Integrated Masters of Technology, Artificial Intelligence	Oct 2022 – Sep 2027
	CGPA - 8.98

EXPERIENCE

Project Intern TATA Steel <ul style="list-style-type: none">Developed a face-based identity verification system using deep feature embeddings and cosine similarity to support secure access control, achieving 95.8% accuracy and 0.94 F1-score.Designed and implemented a real-time inference pipeline using FastAPI and React, integrating authentication, request validation, and activity logging to ensure secure and reliable operation in production environments.Built and optimized the end-to-end face detection and recognition workflow using YOLOv8, reducing inference latency from 480 ms to 120 ms through pipeline optimization, preprocessing improvements, and efficient model deployment.	Oct 2025 – Dec 2025 Jamshedpur(Data Office)
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PROJECTS

SAR Image Colorization <i>PyTorch, U-Net, Docker</i> GitHub	Nov 2025 – Ongoing
<ul style="list-style-type: none">Designed and trained a customized U-Net architecture on 50,000+ paired SAR–RGB images, improving reconstruction quality by reducing MSE from 0.039 to 0.033 and achieving 0.91 SSIM.Built an optimized data preprocessing and augmentation pipeline, reducing training time by 22% and improving model generalization across different satellite imaging conditions.	
Deep Image Steganography <i>Stable Diffusion, DDPM, OpenCV</i> Github	Jun 2025 – Oct 2025
<ul style="list-style-type: none">Designed a hybrid DDPM and Stable Diffusion based framework for secure data embedding in digital images, supporting high capacity message hiding with minimal visual distortion.Implemented a custom encoder–decoder pipeline achieving 99.82% SSIM and reducing steganalysis detection accuracy by 87% across benchmark test images.Automated large-scale evaluation on 10,000+ images with version-wise logging and performance comparison to guide model optimization. (https://image-stego-c5n5.onrender.com)	

Conversational AI Chatbot <i>Gradio, Transformers (HuggingFace), PyTorch</i> Github	May 2025 – Jun 2025
<ul style="list-style-type: none">Built a context-aware conversational system using LLaMA 3.2–1B with embedding-based memory, achieving 95% conversational coherence and 91% intent classification precision.Designed prompt filtering, sentiment analysis, and response validation modules to improve output stability and reduce irrelevant responses by 30%.Optimized backend request handling and caching mechanisms, reducing average response latency by 27% during multi-user testing.	

TECHNICAL SKILLS

Programming: Python, C++, Java, SQL (PostgreSQL)

Coursework: Data Structures & Algorithms, DBMS, Operating System, Computer Networks

AI & Machine Learning: Deep Learning, CNNs, U-Net, YOLOv8, Embedding Models, NLP, Generative AI

Frameworks & Tools: PyTorch, TensorFlow, NumPy, Pandas, OpenCV, Hugging Face Transformers, Docker

Tools & Platforms: Docker, Git, GitHub, FastAPI, Gradio

EXTRA-CURRICULAR & ACHIEVEMENTS

- Semifinalist, NASSCOM Tech Developer Hackathon 2025 (Selected among top teams from 1,200+ participants):** Developed an agentic AI-based call automation system with autonomous intent detection.
- Co-author, IEEE ICIIP 2025:** Published a peer-reviewed research paper on machine learning-based assistive scene description systems. Available online: ieeexplore.ieee.org/document/11346259
- Core Member, Eureka Club (PR & Outreach Team):** Organized **7+** technical workshops attended by over **1,000+** students and led a 5-member outreach team.