Siddharth Paliwal

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EDUCATION

Vellore Institute of Technology   Bhopal, India
Integrated M.Tech In Artificial Intelligence   *August 2021 - August 2026*

St. Anne's Senior Secondary School (CBSE)   Jodhpur, India
Intermediate (Class XII)   *July 2020 - May 2021*

EXPERIENCE

Artificial Intelligence Research Intern   October 2024 – December 2024
Defence Research and Development Organisation (DRDO)   *DLJ, Jodhpur*
- Tasked with generating realistic Indian facial images using GANs to augment sensitive datasets and explore AI applications in synthetic image generation for defense use cases.
- Used StyleGAN3 with both pre-trained and custom models; curated and preprocessed an Indian face dataset; implemented and trained GANs using TensorFlow and PyTorch
- Successfully generated diverse, high-quality facial images; proposed defense applications such as surveillance enhancement and simulation training with synthetic data.

Web Developer Intern   January 2023 - March 2023
Humans of Chhattisgarh (For One Media)   *Remote*
- Collaborated with a team of web developers to design and launch a website that showcases the organization's work and features regular blog posts, enhancing online presence and engagement
- Spearheaded the integration of multimedia features on the website, enhancing storytelling capabilities

PROJECTS

ChatBook | *LLM Powered Assistant*   February 2025 – Present
- Built a real-time chat assistant that processes any uploaded book or document using the Gemini 2.0 Flash LLM, delivering answers up to 78% faster than GPT-4o while maintaining high accuracy in natural language understanding.
- It also uses ChromaDB as it is faster compared to conventional databases for the vector search task, and also used for efficient storage and retrieval of book content.
- Integrated LangChain framework with RAG to manage multi-turn conversations and improve the chatbot's ability to handle complex question flows.

MediLink | *Doctor-Patient Connection Platform*   December 2023 – March 2024
- Co-built a web platform (with two teammates) that enables rural patients to schedule appointments and consult doctors via secure audio/video calls
- Designed a user-friendly interface to streamline communication processes and reduce appointment scheduling time by 25%.
- Planned future partnerships with local organizations and healthcare workers to boost community engagement, introducing a tracking system to monitor impact and increase participation in health initiatives.

AttendEase | *AI Facial Recognition System*   March 2023 – August 2023
- Developed an AI-driven attendance system using Local Binary Patterns Histograms for facial recognition, cutting manual marking time by 30% and offering a scalable solution for any institution.
- Created a clean, OpenCV-powered interface for real-time video processing, delivering seamless user identification with 90% accuracy.

TECHNICAL SKILLS

Languages: Java, Python, R, SQL, HTML/CSS
Database: Familiar with MySQL, MongoDB, ChromaDB, Pincone
AI/ML: TensorFlow, PyTorch, OpenCV, Hugging Face Transformer, GANs, LangChain
Developer Tools: Git, GitHub, Docker, Flutter, Figma, Canva, Linux
Certifications & Training: Applied Machine Learning in Python from University of Michigan (2023), Cloud Computing from IIT Kharagpur (2024), Generative AI with LLMs from AWS & DeepLearning.AI(2025)