Siddharth Paliwal

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Education

Vellore Institute of Technology — Bhopal, MP
Integrated M.Tech in Artificial Intelligence — Aug 2021 - Aug 2026
CGPA: 7.66/10
Coursework: Data Analysis, SW Engineering, OS, Data Structures, Algorithms, AI

St. Anne's Senior Secondary School (CBSE) — Jodhpur
Intermediate (Class XII) — July 2020 - May 2021
Matriculation (Class X)
April 2018 - May 2019

Work 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, leveraging deep learning frameworks like PyTorch and TensorFlow, to augment sensitive datasets for defence applications in synthetic imagery, enhancing computer vision capabilities.
- Delivered high-quality synthetic facial images for surveillance enhancement and simulation training applications.

Projects

ChatBook | *LLM Powered Assistant* — February 2025
Skills: Python, LLM, ChromaDB, LangChain, RAG, Streamlit

- Built a real-time chat assistant that processes any uploaded book or document using Gemini 2.0 Flash LLM achieving 78% faster response times than GPT-4o with high accuracy.
- It also uses ChromaDB as it is faster compared to conventional databases for the vector search task, and is also used for efficient storage and retrieval of book content.
- Integrated LangChain with RAG to manage multi-turn conversations and complex question flows.

MediLink | *Doctor-Patient Connection Platform* — May 2024
Skills: HTML, CSS, JavaScript, LangChain, LLM, Pinecone

- Co-built a web platform (with two teammates) that enables rural patients to schedule appointments and consult doctors via secure audio/video calls.
- Implemented responsive web interface with real-time audio/video calling capabilities, reducing appointment scheduling time by 25%.
- Integrated AI-powered symptom assessment tool using LangChain and medical knowledge base, improving initial patient screening accuracy.

AttendEase | *AI Facial Recognition System* — March 2023
Skills: Python, OpenCV, Local Binary Patterns Histograms, Tkinter, Pillow Library

- 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 an OpenCV-powered interface for real-time video processing with 90% accuracy.

Technical Skills

Programming Languages: Java, Python, R, SQL, HTML, CSS
Frameworks & Libraries: Flask, TensorFlow, PyTorch, FastAPI, OpenCV, Transformer, GANs, LangChain
Databases: MySQL, MongoDB, ChromaDB, Pinecone
Tools: Git, GitHub, Docker, Figma, Linux

Additional

Certifications: Generative AI with LLMs (Coursera, 2025); Docker Foundations Professional Certificate (Docker, 2025); Applied Machine Learning in Python (University of Michigan, 2023)
Languages: English (Fluent); Hindi (Native)
Hobbies & Interests: Graphic Designing(Blender, Adobe Creative Suite, Canva), Chess, Volleyball, Reading