

PREETHI SANJAY

AI / ML Engineer

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AI/ML undergraduate with hands-on experience in Machine Learning, Deep Learning, Physics-Informed Neural Networks (PINNs), Large Language Models, and Agentic AI. Skilled in Python, PyTorch, Scikit-learn, Hugging Face and Ollama with a strong interest in building intelligent systems for real-world application.

PROJECTS

Neuro-Physics-Engine | Physics-Informed Neural Networks

Python, PyTorch, NumPy, Matplotlib | [GitHub](#)

- Developed a Physics-Informed Neural Network (PINN) to solve the 1D Heat Equation using automatic differentiation and physics-based loss functions.
- Built modular training, evaluation, and visualization pipelines with analytical comparison, error heatmaps, and training-loss analysis.

EMOC | Emotion-Aware Conversational AI

Python, PyTorch, OpenCV, TinyLlama, LangChain | [GitHub](#)

- Developed an emotion-aware conversational assistant integrating facial emotion recognition with an LLM for context-aware responses.
- Designed a modular pipeline combining computer vision, prompt engineering, and conversational AI for personalized interactions.

AI Machine Learning Assistant (Ongoing)

Python, LangGraph, LangChain, Ollama, Hugging Face, Streamlit

- Building an agentic AI assistant to explain ML concepts, generate code, debug models, and provide interview support using RAG.
- Developing scalable multi-agent workflows with local LLM integration through Ollama.

TECHNICAL SKILL

Languages: Python, Java, SQL, C

Machine Learning: Scikit-learn, PyTorch, Neural Network, PINNs

Generative AI: Hugging Face, Ollama, RAG

Libraries: NumPy, Pandas, Matplotlib

Tools: Git, GitHub, VS Code, Jupyter Notebook, MySQL, Linux

CERTIFICATION & ACHIEVEMENTS

[Elements of AI](#)

[Kaggle -Introduction to Machine Learning](#)

[Kaggle-Pandas](#)

3rd Place – SHERADIL HACKATHON

[MSME HACKATHON](#)

EDUCATION

B.Tech - Computer Science Engineering , VIT-AP University

2024– 2028

CGPA: 8.66

Coursework: AI, Machine Learning, Deep Learning, Digital Image Processing, DSA, DBMS, Entrepreneurship