Shashank Rai

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linkedin   k Kaggle Repository   Portfolio

Summary

M.Tech student at IIIT Lucknow with practical experience in AI, machine learning, and generative AI. Proficient in developing multi-agent systems, RAG-based chatbots, and LLM-powered automation tools using LangChain, Gemini Pro, and CrewAI. Strong foundation in Python, deep learning, and MLOps with a focus on building scalable, real-world AI solutions.

Education

Indian Institute of Information Technology, Lucknow	2023 – 2025
Master of Technology(M.Tech) in Computer Science	*GPA: 8.25*
Krishna Engineering College, Ghaziabad	2018 – 2022
Bachelor of Technology(B.Tech) in Computer Science	*GPA: 7.56*

Projects

Agentic-AI Meeting Minutes Generator | CrewAI ,Gmail API
- Automated .wav audio transcription and summarization by creating an AI workflow, synthesizing key points including sentiment analysis and action items, improving documentation efficiency by 8 hours weekly.
- Spearheaded development of an AI-powered workflow leveraging CrewAI agents and Gemini 1.5 Pro to transcribe meeting audio, resulting in a 90% reduction in manual documentation efforts.

Agentic-AI Customer Support Ticket Analyzer & Router | Pydantic-AI
- Built a multi-agent LLM system using Pydantic for automated support ticket triaging—analyzing intent, urgency, and priority—achieving 85%+ routing accuracy and enabling 24/7 customer query resolution.

RAG-Based Chatbot for Gym Customer Support| LangChain, LangGraph
- Developed a LangChain-based RAG chatbot with Gemini-1.5 Pro and ChromaDB, delivering real-time, context-aware answers to 50+ gym-related queries via MMR-based retrieval and chat history-aware prompts.

Self-Drive Car | Computer Vision, YOLO
- Built a real-time self-driving car simulation using OpenCV and YOLO for lane detection and steering angle prediction, achieving 92% accuracy across test tracks using multi-model training on merged datasets.

Work Experience

IIIT Lucknow | *Teaching Assistant* — Aug 2023 – Present
- Facilitated weekly lab sessions for 80+ B.Tech and M.Sc. Computer Science students, achieving a 95% student satisfaction rate based on semester-end feedback surveys regarding teaching quality.
- Assisted in grading assignments and evaluating answer sheets in OS and Networking labs.

Skills

- **Programming & Computer Science:** Python, C, SQL, OOP, DSA, OS, DBMS
- **Machine Learning & AI:** Supervised/Unsupervised Learning, Deep Learning (ANN, NLP), CNN Architectures (InceptionNet, RCNN, UNet, YOLO)
- **LLMs & Generative AI:** LangChain, LangGraph, CrewAI, n8n, MCP, Pydantic-AI, RAG, Agentic-AI, Prompt Engineering, Fine-Tuning
- **Frameworks & Libraries:** PyTorch, TensorFlow, Keras, Scikit-learn, Pandas, Matplotlib, FastAPI
- **MLOps & Software Engineering:** Git, Docker, DVC (local, AWS S3), MLflow (local, DagsHub, AWS), Experiment Tracking

Publications (In Progress)

A Two-Phase ML Framework for Detecting Cyberattacks on EV Charging Systems – focuses on Attacks detection and classification in smart EV infrastructure.