VAIBHAV JAKHAR

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SUMMARY

Driven and results-oriented software engineer with expertise in **data structures and algorithms (DSA)** with hands-on experience in **, Deep Learning , GenAI , Computer Vision , NLP, RAG Applications , LLM** Seeking opportunities to apply my skills in AI research, problem-solving, and AI/ML system development as a **Data Scientist** or **ML Engineer**.

SKILLS

Technical Skills	Python, C++, C, SQL, JS, TensorFlow, PyTorch, Scikit-Learn, OpenCV, Pandas, NumPy
Full-Stack AI	Langchain, Flask, FastApi, Django, Mongodb, MLflow, DVC, Astro, ETL, Huggingface, AWS Cloud
Soft Skills	Strategic Leadership, Efficient Time Management, Analytical Thinking, Innovative Problem-Solving
Languages	English (Fluent), Hindi (Fluent)

PROJECTS

Deep Research AI Agent (Agentic AI) April-2025

- Built a dual-agent AI research assistant using LangGraph and LangChain - one agent autonomously gathers real-time insights from Tavily, Arxiv, Wikipedia, while the second synthesizes structured outputs using Groq LLM.
- Went beyond traditional RAG by enabling dynamic tool calling, agentic decision-making, tool orchestration and multistep reasoning via a custom LangGraph flow.resulting in a 30% improvement in contextual understanding
- Achieved high-quality research outputs with sub-1.5s latency and context-aware responses without hallucinations with 93% relevant retrieval accuracy in multi-turn queries ,Hosted on Streamlit Cloud, 1.2s average response time.
- Uses LangGraph, LangChain, Groq(Qwen-QWQ-32B), Tavily API, Arxiv API, Wikipedia API, and Streamlit.

Toxic Comment Classification March-2025

- Built a BiLSTM-based deep learning model on the Jigsaw dataset for multi-label classification
- Identifying 6 toxicity categories: toxic, severe toxic, obscene, threat, insult, and identity hate.
- Processed 160K+ comments by TextVectorization, optimizing with MCSHBAP increasing training speed by 25% achieving 91.2% accuracy, 0.89 precision, and 0.87 recall
- Deployed via Gradio for real-time toxicity detection with 1.5s avg inference time per comment

Classification Analysis CNN(ResNet-18) vs Vision Transformer (ViT-B/16) January-2025

- Evaluates accuracy-speed trade-offs between CNN(ResNet-18) and self-attention-based (ViT-B/16) models
- Benchmarked on 10% of CIFAR-10 dataset using accuracy, loss, training time, precision, F1-score, and recall
- Results: ViT-B/16 achieves higher Test accuracy (97.22% vs. 78.31%), but requires significantly more training time (117.80s vs. 37.59s)

EDUCATION

B.Tech (CSE), ABES Engineering College - CGPA: 7.35 2022 - 2026
Class XII, Dayawati Modi Academy - 90% 2020 - 2021
Class X, Dayawati Modi Academy - 91.2% 2018 - 2019

ACHIEVEMENTS

- Active member of the CSE department's E-Cell Club, handling industry projects, example
- Mitzvah (Smart Air Curtain System) - Collaborated on developing a camera-based system using Raspberry Pi 3 to count daily store visitor and designed the mobile app frontend with Flutter for seamless user experience.
- Solved 500+ DSA problems across Codeforces and LeetCode, Codeforces (Rating: 1050)- Leetcode (Rating: 1598)
- Self-Learner: Acquired AI/ML , Deep Learning expertise through independent study and hands-on projects

SKILLS/INTERESTS/MISCELLANEOUS

- Interests - AI & ML,Competitive Programming , Finance & Trading, Governance & Politics , Tech & Innovation
- Hobbies: Gym, Badminton, Tennis.