Kush K.

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Professional Summary

Computer Science student passionate about software development, Gen AI, and backend systems. Experienced in Python, LLMs, and database management. Strong problem-solving and teamwork skills with expertise in LangChain, LangGraph, and OpenCV.

Technical Skills

- **Programming:** Python, Java (OOPs, DSA)
- **Backend:** SQL, MySQL
- **Gen AI:** LLMs, LangChain, LangGraph, AI automation
- **ML/AI:** OpenCV, OCR
- **Tools:** Git, Docker, AWS

Work Experience

Project Intern — HCL Pvt Ltd   *Dec '24 – Jan '25*

- Worked on database management and query optimization.
- Developed and maintained SQL-based enterprise data solutions.

Projects

Parking Management System (*OpenCV, OCR*)   *Mar '24 – Apr '24*

- Automated number plate detection using OpenCV and OCR for efficient parking management.
- Designed a system to track vehicle entry and exit, reducing manual effort.

MCQ Generator (*LangChain, Python, LLM - Ollama*)   *Oct '24 – Nov '24*

- Developed an AI-powered system that takes input files (PDF, DOCX) and generates multiple-choice questions (MCQs) using LLMs.
- Integrated LangChain for prompt engineering and Ollama for efficient model inference.
- Designed a user-friendly interface for educators to customize MCQ difficulty and topics.

Smart IoT Trash Can (*Rainforest Regression, Arduino Uno*)   *Feb '25 – Apr '25*

- Developed an intelligent IoT-enabled trash can with real-time monitoring and predictive analysis using Rainforest Regression.
- Implemented the hardware setup with Arduino Uno for real-time fill-level detection.
- Built a robust time-series prediction model for accurate fill-time estimation, enhancing collection efficiency.

AdNova AI: Context-Aware Ad Recommender using LangGraph Agents   *Ongoing*

- Designed and built an AI-powered ad recommendation system using LangGraph and LangChain.
- Developed an LLM-based agent to analyze webpage content, extract semantic context, and classify it into ad categories.
- Retrieved the most relevant ad from a local database based on context.
- Implemented clean APIs using FastAPI to serve ad recommendations and log basic click analytics.

Education

B.Tech in Computer Science   *2022 – Ongoing*
VIT Bhopal University
CGPA: 8.21

Class XII   *2020*
Kendriya Vidyalaya Sainik Vihar
Percentage: 89%

Class X   *2018*
Kendriya Vidyalaya Sainik Vihar
Percentage: 83%

Certifications

- The Bits and Bytes of Computer Networking (Coursera): Link
- NPTEL Cloud Computing Certification
- NPTEL Marketing Analysis Certification
- C++ Programming Certificate (Simplilearn): Link

Achievements

- Core Member of Null Student Chapter (Event Management Team)
- 1st Place in 3x3 Rubik's Cube Solving Competition (55 sec)

Additional Information

- **Languages:** English, Hindi
- **Hobbies:** Solving Puzzles, Listening to Music
- **Teaching Experience:** Self-employed Math tutor for 2+ years