Kush K.

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Bhopal, Madhya Pradesh, India

Education

Vellore Institute of Technology, India CGPA: 8.17/10
Bachelor of Technology in Computer Science *2022 – 2026*

Technical Skills

Languages: Python, Java, SQL
Backend: MySQL, FastAPI
Gen AI: LLMs, LangChain, LangGraph, AI automation, Ollama, RAG
ML/AI: OpenCV, OCR, Tesseract
Tools: Git, Docker, AWS

Experience

Project Intern Dec 2024 – Jan 2025
HCL Tech *Remote*

- Developed automated Excel-to-SQL data import system reducing manual data entry by 80%
- Engineered robust MySQL database architecture optimized for dashboard reporting and analytics
- Implemented comprehensive data validation and transformation pipelines for external file systems
- Created automated data preprocessing workflows ensuring data integrity and consistency
- Performed detailed data analysis and built reporting infrastructure for business intelligence

Projects

Specialized LLM for Indian Constitution | Fine-Tuning, Llama-3, QLoRA Sept 2025
Domain-Specific Legal AI Specialist *GitHub*

- Fine-tuned Meta Llama-3 8B on a custom-built Q&A dataset of the Indian Constitution
- Utilized Unsloth library for 2x faster training and 50% reduction in VRAM usage on a single GPU
- Implemented QLoRA for memory-efficient training, loading the base model in 4-bit precision
- Monitored training in real-time with Weights & Biases, achieving an 86% reduction in training loss

MCQ Generator | LangChain, Python, Ollama, RAG Oct 2024 – Nov 2024
AI-Powered Educational Content Generator *GitHub*

- Engineered intelligent MCQ generation system supporting PDF, DOCX, and text file formats
- Integrated LangChain with custom prompt templates for diverse question types and difficulty levels
- Built intuitive web interface allowing educators to customize topics, difficulty, and question count
- Achieved 95% content accuracy with automated quality scoring and validation mechanisms

Parking Management System | OpenCV, OCR, Computer Vision Mar 2024 – Apr 2024
Computer Vision-Based Parking Solution *GitHub*

- Developed real-time ANPR (Automatic Number Plate Recognition) system with 96% accuracy
- Implemented advanced computer vision pipeline using OpenCV for license plate detection and extraction
- Integrated Tesseract OCR with custom preprocessing for enhanced text recognition in various lighting
- Optimized image processing algorithms reducing detection time from 2.5s to 0.8s per vehicle

Certifications

Oracle Cloud Infrastructure 2025 Certified Generative AI Professional 2025
Oracle *View Certificate*

Oracle AI Vector Search Certified Professional 2025
Oracle *View Certificate*

Leadership & Achievements

Core Member March 2024 – May 2025
Null Student Chapter - Event Management Team *VIT Bhopal*

- Organized and managed technical events and workshops for 200+ students
- Led event planning initiatives resulting in 40% increase in student participation
- Coordinated with industry experts for technical talks and mentorship sessions