# 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 Spring Boot, LangChain, and OpenCV.

### **Technical Skills**

- Programming: Python, Java (OOPs, DSA)
- Backend: Spring Boot, SQL, MySQL
- Web: HTML, CSS, JavaScript
- Gen AI: LLMs, LangChain, AI automation
- ML/AI: OpenCV, OCR
- Tools: Git, Linux, Networking Basics

### Work Experience

# Project Intern — HCL Pvt Ltd

(2 months)

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

#### **Projects**

### MCQ Generator (LangChain, Python, LLM - Ollama)

- Developed an AI-powered system that takes input files (PDF, DOCX) and generates multiple-choice questions (MCQs) using Large Language Models (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.

# Parking Management System

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

### Smart IoT Trash Can

- Developed an intelligent IoT-enabled trash can with real-time monitoring and predictive analysis using **Rainforest Regression** to optimize waste collection schedules and prevent overflow incidents.
- Designed and implemented the hardware setup with Arduino Uno for precise real-time fill-level detection.
- Built a robust time-series prediction model for accurate fill-time estimation, enhancing collection efficiency.

### Education

#### B.Tech in Computer Science VIT Bhopal University

CGPA: 8.34/10

2022 - Ongoing

Class XII

Kendriya Vidyalaya Sainik Vihar

2020

Percentage: 89%

**Class X** Kendriya Vidyalaya Sainik Vihar

2018

Percentage: 83%

## Certifications

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

## Achievements

- Secured 42nd place in Capture the Flag event by KYC.
- 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.