

# Krishank Dubey

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## SUMMARY

High-achieving Computer Science student specializing in AI & ML with a strong foundation in Data Structures and Algorithms. Recognized among the Top 500 teams nationwide in Smart India Hackathon (SIH) and the Top 5 Percentile in Adobe GenSolve. Skilled in architecting cloud-native AI solutions and scalable full-stack web applications using Python, TensorFlow, React.js, and Node.js. Demonstrated leadership experience as a Technical Team Lead, fostering innovation and delivering optimized software solutions.

## TECHNICAL SKILLS

**Programming Languages:** C++, Python, JavaScript

**Web Technologies:** HTML, CSS, React.js, Node.js, Express.js, Tailwind CSS, Bootstrap, jQuery

**Databases:** PostgreSQL

**Core Concepts:** Data Structures & Algorithms, OOPS, Operating Systems, DBMS

## PROJECTS

### SONICSPLIT: AI-Powered Audio Separation Engine

Oct 2025 – Present

Personal Project

Python, TensorFlow, Spleeter, Streamlit

- Architected a cloud-native audio platform using pre-trained neural networks to decompose musical tracks into 4 distinct stems (vocals, drums, bass, other) with high fidelity.
- Engineered an ‘Adaptive Resource Management’ algorithm to dynamically downsample audio (44.1kHz to 16kHz), enabling complex separation tasks to execute within strict 1GB cloud RAM limits.
- Developed an interactive visualization engine using Librosa and Plotly for real-time spectrograms, and integrated DSP pipelines for pitch-shifting and time-stretching.

## ACHIEVEMENTS

### Smart India Hackathon (SIH)

Dec 2025

Government of India

Top 500 / 1.4 Lakh Teams

- Led a team to rank in the Top 500 out of 1.4 Lakh+ teams nationwide, conceptualizing an AI-driven Traffic Management System to reduce urban congestion.
- Integrated LSTM Neural Networks for time-series traffic forecasting and Computer Vision for real-time signal adaptation, optimizing flow based on vehicle density.
- Deployed Object Detection models to identify and prioritize emergency vehicles, creating an automated override system for faster emergency response.

### Adobe GenSolve Hackathon

Aug 2024

Adobe

Top 5 Percentile

- Orchestrated a team to develop a predictive machine learning model for a business problem statement, achieving 92% accuracy on the test dataset and securing a place in the Top 5 percentile among all participants.

## CODING PLATFORM PROFILES

[LeetCode](#) | [HackerRank](#) | [Codeforces](#)

## EDUCATION

### VIT Bhopal University

Sep 2023 – Present

B.Tech, Computer Science Engineering with specialization in AI & ML

Current CGPA: 8.15

## CERTIFICATIONS

- Applied Machine Learning in Python, Coursera
- Foundations of Web Development: CSS, Bootstrap, JS, React, Udemy

## EXTRACURRICULAR ACTIVITIES

### Team Lead, Web Development

Dec 2024 - Present

iCreate Club, VIT Bhopal University

- Mentor and lead a team of 15 junior developers in building the official club website and related projects, fostering skill development and collaborative coding practices.