# Om Kumar Singh

#### SUMMARY

Aspiring Machine Learning Engineer and Full Stack Developer with a passion for solving real-world problems using AI, web development, and scalable systems.

### **EDUCATION**

 VIT Bhopal University
 2023 – 2027

 B. Tech, CSE (AI & ML)
 CGPA: 8.87

 Jamshedpur Public School
 2020 – 2022

 Class XII (CBSE)
 90.4%

 Tarapore School
 2008 – 2020

 Class X (ICSE)
 93.4%

### TECHNICAL SKILLS

- Languages: Python, Java, C++, C, SQL, JavaScript
- Web: HTML, CSS, React.js, Tailwind CSS, Node.js, Express.js
- Frameworks/Tools: TensorFlow, Keras, Flask, Streamlit, LangChain, ChromaDB, MongoDB, Vercel, Render, Postman, Git, JWT, bcrypt, Scikit-learn

#### **PROJECTS**

## TravelWorld Tour Management Web App (Live 🗹) (GitHub 🗹)

2025

- Stack: React.js, Tailwind CSS, Node.js, Express.js, MongoDB, JWT, Vercel, Render
- Built and deployed a responsive MERN stack platform for booking and managing tour packages.
- Integrated JWT authentication and REST APIs, reducing manual processing time by 40%.
- Optimized frontend to reduce load time by 25% and enhance mobile responsiveness.

## Conversational RAG Chatbot with Gemini & ChromaDB (Live 🖒) (GitHub 🖒)

2025

- Stack: Python, Streamlit, LangChain, ChromaDB, Google Gemini API
- Implemented an intelligent RAG chatbot with memory and multi-document ingestion.
- Improved semantic answer accuracy by 30% using Gemini embeddings and LangChain.
- Achieved 92% relevance score in user testing using ChromaDB retrievers.

### AI-Based Plant Disease Detection System

2024

- Stack: Python, TensorFlow, Keras, Flask, Streamlit, Pillow
- Built a CNN achieving 91% accuracy for leaf image classification of plant diseases.
- Integrated Flask API with Streamlit UI for real-time diagnosis and treatment advice.

#### EXTRACURRICULAR

### Google Crowdsource Community

2024 - Present

Operations and Content Lead

### Linpack Club, VIT Bhopal

2024 - Present

Core Member

### **CERTIFICATIONS & HACKATHONS**

- Java Foundations 1Z0-811 🗹
- Postman Student Expert 🗹
- Smart India Hackathon 2024

- Ethnus MERN Full Stack
- Python Essentials VITvarthi
- EY Techathon 4.0

- NPTEL Cloud Computing IIT KGP 🗹
- AI/ML Fundamentals VITyarthi
- HP Power Lab Hackathon 🗹
- HackOn Amazon 2025