

Rajnath Singh Tomar

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Detail-Oriented B.Tech IT student with demonstrated experience in full-stack development and applied machine learning. Proficient in building scalable applications and AI-driven tools with a strong foundation in Python, C++, and modern JavaScript frameworks.

Education

Institute of Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur

2023 – 2027

Bachelor of Technology in Information Technology Relevant Coursework: Data

Structures & Algorithms, System Design, Machine Learning, Computer Network

Experience

Experienced in full-stack development, AI systems, and collaborative problem-solving.

- Participated in multiple national-level hackathons, including Smart India Hackathon (2025) selected at university level in top 5, contributing to solution design and on-ground implementation support.
- Selected among the top 10 teams out of 150 for GeeksforGeeks Hactivate 2025 for Finale at Anurag University for demonstrating strong database optimization and high-performance application design skills.
- Finalist at Navonmesh'25, a national-level civic-tech hackathon held at SSIPMT Raipur. Our team developed JanBudget, a transparency-driven public budgeting platform and I contributed by supporting backend development

Projects

StayMania | Full-Stack Web Application

[GitHub]

- Built and deployed a full-stack booking platform featuring secure authentication, role-based access and responsive UI.
- Integrated **Cloudinary** for media handling, **Mapbox** for geolocation services, and used **MongoDB Atlas** for schemas.
- Implemented **CRUD** operations and automated listing flows, reducing user navigation time and improving booking efficiency.
- TechStack:** Node.js, Express.js, React, MongoDB, Cloudinary, Mapbox, Render

RAG Pipeline – LLaMA + ChromaDB Conversational AI System

[GitHub]

- Developed RAG system using **LLaMA 3.2-1B**, achieving high-accuracy responses for domain-specific queries.
- Integrated **all-mpnet-base-v2 embeddings** with **ChromaDB** to enable semantically context retrieval and low-latency.
- Prepared a **FastAPI** backend to manage embedding pipelines, retrieval APIs, and LLM inference endpoints, enhancing modularity and system throughput.
- TechStack:** Python, FastAPI, LLaMA, ChromaDB, Hugging Face, Transformers, CUDA.

Personal Portfolio Website

[GitHub]

- Created a high-performance personal portfolio having role based access, achieving a **Lighthouse mobile score of 73**, with **FCP 2.6s and LCP 5.7s**, optimized through SSR, efficient asset delivery, and advanced SEO techniques.
- Tech Stack:** Next.js, Cloudinary, MOngoDB, React, Framer Motion, Tailwind CSS, Vercel.

Certifications

- Full Stack Web Development Certificate** -Apna College
- Complete Data Science,Machine Learning,DL,NLP Bootcamp** - Udemy
- Google Developer Group on Campus** -Member Badge

Skills

Languages Python, C, C++, JavaScript, SQL

Frameworks & Libraries React, Next.js, Node.js, Express, PyTorch, Hugging Face, Tailwind CSS

Databases MongoDB, PostgreSQL, MySQL, Firebase

Tools & Platforms Git, GitHub, Docker, Postman, Vercel, Render

Concepts Data Structures, Algorithms, System Design, REST APIs, Machine Learning, NLP