

RAHUL RAJ

Ranchi, Jharkhand

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EDUCATION

Indian Institute of Technology Bhilai

B.Tech in Data Science and Artificial Intelligence — CGPA: 8.15/10

August 2023 – May 2027

Bhilai, India

DAV Kapil Dev Public School

Central Board of Secondary Education

April 2009 – May 2023

Ranchi, India

Class 10th: 97.6%

2021

Class 12th: 91.8%

2023

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, C++, SQL

Frameworks / Libraries: React.js, Node.js, Express.js, DaisyUI, LangChain, LangGraph, LangSmith, Streamlit

Databases: PostgreSQL, MongoDB, Prisma, Mongoose

Tools / Platforms: Git, GitHub, Postman, VS Code, Render

APIs / Other: REST APIs, Judge0 API, OpenAI API

PROJECTS

1. LeetCode |

- Built backend for a full-stack coding platform (LeetCode-style) with user auth, problem-solving, and submissions.
- Used **Judge0 API** for real-time, multi-language code execution and validation.
- Designed full **Contest module** with timed access, submissions, and dynamic leaderboard.
- Added AI-powered code review via **OpenAI API** for logic, performance, and quality feedback.
- Built modular REST APIs using **Node.js**, **Express.js**, **PostgreSQL**, **Prisma**, and **JWT**.

2. LLM Chat Assistant |

- Built GPT-4.1-based **AI assistant** with **LangGraph** and **LangChain** for tool use and memory.
- Integrated **human-in-the-loop** system for admin intervention using **interrupt()**.
- Used **MongoDB Checkpointer** for session persistence and multi-turn memory.
- Enhanced tool routing with decorators and conditional logic in **LangGraph**.

3. Full Stack Voice AI Chatbot |

- Built backend for real-time **voice-based chatbot** using **React.js**, **Express.js**, and streamable APIs.
- Used **OpenAI Whisper** for speech-to-text and **TTS APIs** for AI voice responses.
- Created a custom **LangGraph state machine** for mood-based (sweet/rude/romantic) replies.
- Handled continuous conversation flow with secure audio I/O and session tracking.

EXPERIENCE

1. Junior Developer Intern — Basil Infotech | Remote

May 2025 – July 2025

- Contributed to a Smart Hospital Management System using Node.js, Express.js, MongoDB, and EJS.
- Developed and debugged both frontend and backend features, resolved merge conflicts, and ensured seamless module integration.

ACHIEVEMENTS

- Code Crusade:** Winner of IIT Bhilai's intra-college coding contest (2024).
- JEE Advanced:** AIR 5977 among 2L+ candidates.
- JEE Mains:** Scored 99.3 percentile (April 2023).
- GFG 160-Day Challenge:** Successfully completed on GeeksforGeeks.
- LeetCode:** Solved 300+ problems.