

AYUSHMAN SAXENA

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Education

National Institute of Technology, Rourkela

Metallurgy and Materials Engineering (CGPA - 7.75)

November 2022 – June 2026

Rourkela, Odisha

BSD Public School

AISCCE – CBSE, Science (PCM) (Percentage - 76%)

April 2020 - May 2021

Etah, UttarPradesh

CP Vidhya Niketan

AISSE – ICSE (Percentage - 85%)

April 2018 - May 2019

Farrukhabad, UttarPradesh

Relevant Skills

- Data Structures and Algorithm
- Database Management
- Object Oriented Programming
- Operating System
- Web-Development

Professional Experience

NIT Rourkela

Research Intern

May 2025 – June 2025

Rourkela, Odisha

- Created a **modular, production-ready ML pipeline** in **Python** with clean architecture, reusable modules, and automated evaluation scripts
- Developed an **end-to-end system** integrating data preprocessing, feature engineering, model training (LSTM, XGBoost), and performance tracking
- Optimized pipeline execution and scalability, achieving **38% lower RMSE** on a **100,000+ row dataset** through systematic testing and iteration

Projects

Algorithm Visualizer

React.js, Tailwind CSS, JavaScript

April 2025 – May 2025

GitHub

- Visualized **10 core algorithms**, including 2 **pathfinding algorithms** (Dijkstra's, BFS) and 5 **sorting techniques**
- Developed **5+ reusable React components** and pioneered a clean, responsive UI using **Tailwind CSS**
- Collaborated with 1 peer to develop **algorithm logic and frontend** using DSA and web development skills
- Simulated **speed-adjustable visualizations** (0–2000ms delay) for real-time execution and better understanding

Smart Contract Analyzer

FastAPI, LangChain, RAG, Google Gemini Flash, Python, LLMs

June 2025 – July 2025

GitHub

- Built an auditing system to analyze smart contracts, detecting **20+ vulnerabilities** and Qubic compliance issues
- Introduced a **RAG pipeline** with **Gemini Flash** for accurate and interpretable flaw analysis.
- Integrated **LangChain** into a **FastAPI backend** for real-time LLM-driven feedback
- Achieved **92% detection accuracy** across varied smart contract test cases, ensuring robust validation and reliability

Doctor's Appointment Booking System

MERN Stack (MongoDB, Express.js, React.js, Node.js), JWT, Context API

November 2024 – December 2024

GitHub

- Deployed a **full-stack doctor appointment system** with **3 user roles** and **JWT-based secure authentication**
- Implemented core features like **booking/cancellation, profile management, and real-time dashboards**
- Designed an **admin panel** to manage **15 doctors across 6 specialties**, with full appointment oversight
- Developed a **scalable Node.js backend** with **20+ APIs** using **MongoDB**, handling **concurrent users efficiently**

Achievements/Certifications

- **Lablab.ai Hackathon – 4th Place (922 Teams)** July 2025
Proposed a prototype to detect errors in Qubic smart contracts using RAG and LangChain Certificate

Technical Skills

- **Languages:** C++, JavaScript, Python, HTML/CSS
- **Technologies/Frameworks:** React.js, Node.js, Express.js, MongoDB, Tailwind CSS, REST APIs, JWT
- **Tools&Platforms:** Git, Github, Postman, Vercel, Netlify

Extracurricular Activities

Cosmopolitan

Event Volunteer

October 2023 – November 2023

NIT Rourkela

- Organized and executed over **10+ events** with a total attendance of **500+ participants**