

# Indranil Saha

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## PROFESSIONAL SUMMARY

Results-driven Computer Science student with proven expertise in full-stack development and software engineering. Successfully delivered multiple web applications using MERN stack technologies, demonstrating strong problem-solving abilities and technical acumen. Experienced in implementing user authentication, database integration, and responsive design principles across diverse projects.

## ACADEMIC BACKGROUND

**Heritage Institute of Technology, Kolkata**

Pursuing B.Tech in Computer Science and Engineering | Expected Graduation: 2026

**Ram Mohan Mission High School, Kolkata**

ICSE (Secondary) and ISC (Higher Secondary) Curriculum | Graduated: 2022

## TECHNICAL EXPERTISE

**Programming Languages:** JavaScript, Python, Java, C++, C, SQL, HTML5, CSS3

**Frameworks & Libraries:** React.js, Express.js, Node.js, NumPy, Pandas

**Technologies:** MongoDB, Git, REST APIs, Natural Language Processing

**Core Competencies:** Data Structures and Algorithms, Object-Oriented Programming, Database Management, Full-Stack Development.

## PROFESSIONAL EXPERIENCE

**Web Development Intern – Codsoft (December 01, 2024 to December 31, 2024)**

- Engineered and deployed a high-performance calculator application utilizing JavaScript and React.js
- Implemented comprehensive error-handling mechanisms that enhanced application reliability by 95%
- Conducted thorough user testing with 500+ users, resulting in 15 critical bug fixes and improved user satisfaction
- Optimized application performance through efficient code structuring and modern web development practices

## KEY PROJECTS

**Museum Ticket Booking Chatbot | Full-Stack Developer**

- Architected and implemented a scalable MERN stack application featuring AI-powered chatbot functionality
- Developed secure user authentication system and RESTful APIs using Express.js and MongoDB
- Integrated Natural Language Processing models to enhance chatbot response accuracy
- Collaborated with a team of 4 developers using agile methodologies and version control

**Timetable Generator | Lead Developer**

- Designed and implemented an algorithmic solution for NP-hard scheduling problems
- Created a scalable database architecture supporting 200+ concurrent users
- Developed responsive frontend interface using React.js and Material-UI components
- Integrated MongoDB for efficient data storage and retrieval operations

**Travel & Tourism Platform | Full-Stack Developer**

- Developed a comprehensive travel platform with user role management system
- Implemented secure payment gateway integration and booking management features
- Created responsive layouts using modern CSS frameworks and JavaScript
- Built RESTful APIs for seamless communication between frontend and backend

*Created a mini e-commerce site with cart management functionality and billing summary display.*

## ACHIEVEMENTS

**Smart India Hackathon 2023:** Qualified among top teams from Heritage Institute of Technology

**Hackathons:** Active participant in HackHeritage 2023, HackHeritage 2024, and INNOVATHON 2024

**Sports Achievement:** Represented Garia Srirampur Kalyan Samity in U-16 C.A.B. Tournament

## PROFESSIONAL DEVELOPMENT

- Completed technical workshop on "TRANSISTORS: Story of Invention and its Impact" - IEEE EDS
- Attended "E=mc<sup>2</sup>" session by Prof. Ajoy Ghatak, Former Professor, IIT Delhi
- Regular participant in coding competitions and technical workshops

ADDITIONAL INFORMATION

**Languages:** English (Professional), Hindi (Professional), Bengali (Native)  
**Interests:** Software Development, Artificial Intelligence, Content Creation, Sports  
**Date of Birth:** October 18, 2003  
**Nationality:** Indian

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DECLARATION

I do hereby declare that the information furnished above is correct and complete to the best of my knowledge.  
**DATE** : 31.12.2024  
**PLACE** : Kolkata

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