

Rohan Sony

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[Portfolio](#) | [Github](#) | [LinkedIn](#) | [CodeForces](#)



Education

Indian Institute of Technology (Indian School of Mines), Dhanbad

Int. M.Tech., Mathematics and Computing (CGPA: 7.20 / 10)

2022-27
Dhanbad, Jharkhand

Relevant Coursework: C/C++, Java, Object-oriented Programming, Data Structures and Algorithms, Statistics, Discrete Mathematics, Operating Systems, Databases, Theory of Computation, Cryptography, Networks

Oxford Senior Secondary School

XII (93.2 percent)

2020-22
Muzzafarpur, Bihar

Skills

Programming Languages: C/C++, Java, Python, JavaScript (ES6+), TypeScript

Frontend Stack: React 19, React Native, HTML5 Canvas, CSS3, Tailwind CSS, Responsive Design

Backend Stack: Node.js, Express.js, RESTful APIs, JWT Authentication, Data Validation

Database Technologies: TypeORM, SQLite, MongoDB, Database Design, Data Modeling

Mobile Development: Expo Framework, Cross-platform Development, Native APIs Integration, Location Services

AI & ML: Neural Networks, Genetic Algorithms, Computer Vision, Game Physics, Algorithm Design

DevOps: Vercel, Docker, CI/CD Pipelines, Environment Management, Performance Optimization

Development Tools: VS Code, IntelliJ IDEA, Terminal, Git & Version Control, Android Studio

Projects

Short URL Service | [GitHub](#) | [Live Demo](#)

Tech Stack: React 19, TypeScript, Node.js, Express, TypeORM, SQLite, Tailwind CSS, React Query, Zod validation, Vercel

- Built a production-ready URL shortening service with real-time analytics dashboard and user authentication
- Implemented JWT-based authentication system with password hashing and protected API routes
- Developed comprehensive click tracking and URL management with custom alias support

Self-Driving Car AI Simulation | [GitHub](#) | [Live Demo](#)

Tech Stack: JavaScript (ES6+), HTML5 Canvas, CSS3, Neural Networks, Genetic Algorithms, Computer Vision, Game Physics, Object-Oriented Programming, Vercel

- Created an interactive simulation where 100 AI cars learn to drive using neural networks and genetic algorithms
- Implemented ray-based sensor system for obstacle detection and real-time neural network visualization
- Designed evolutionary learning system with mutation-based improvement and brain persistence

Weather App (React Native) | [GitHub](#) | [Live Demo](#)

Tech Stack: React Native, Expo, TypeScript, React Query, React Native Paper, AsyncStorage, Expo Location, OpenWeatherMap API, Tailwind CSS, Vercel

- Developed cross-platform weather application with GPS location detection and multiple location management
- Integrated real-time weather data API with comprehensive metrics including UV index, humidity, and wind data
- Implemented time-based dynamic themes, offline storage, and responsive design for iOS, Android, and Web

Achievements

- Recipient of the prestigious ISMAANA scholarship sponsored by the Narendra Vashisht Foundation.
- Secured AIR 5176 in JEE MAINS 2022.
- Secured AIR 6550 in JEE ADVANCED 2022.
- Global Rank 297 in Starter 135 Codechef.
- Global Rank 1458 rank in Codeforces Round 166.
- 1600+ rating on Codechef, 1400+ rating on Codeforces.
- Solved 500+ problems on coding platforms viz. LeetCode, GFG, CodeForces, CodeChef

Social Engagements

- **Core Member:** Black Knight Chess Club, IIT (ISM) Dhanbad
- **Volunteer:** at KARTAVYA - NGO run by students of IIT Dhanbad to educate underprivileged children
- **Sports-Engagements:** Badminton, Chess, Cricket, Table-tennis, National Sports Organisation (NSO) participant in YOGA