# Vaibhav Barala

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## Education

**IIT ISM** 

Expected May 2026 Dhanbad, Jharkhand

Bachelor of Technology in Environmental Engineering (GPA:8.1 / 10.00)

• Relevant Coursework: Data Structures and Algorithms (C++), , Intro to CS II (C++), OOPS.

## **Projects**

**Real Estate App** | Reactis, Nodejs, Prisma, Mongo DB, Expressis

- Designed and developed a highly responsive real estate web application using Reactjs for dynamic front-end user experiences.
- Engineered a robust database management system using MongoDB and Prisma, achieving a 40% increase in query speed and enabling seamless real-time property listings and search functionality for over 1,000 active users.
- Implemented a real-time chat feature using WebSocket and Socket.io, enhancing user engagement and reducing response time by 20%.

**Tripplanner App** | Reactis, Firebase, GooglegeminiApi.

- Unified Platform: Developed a TripPlanner web app using ReactJS for a responsive interface and Gemini API for comprehensive travel data, offering features like personalized trip recommendations, interactive maps, and detailed destination information.
- User Assistance: Implemented features that help users efficiently plan their trips by providing tailored itineraries, alerts for travel updates, and easy access to booking options, ensuring a stress-free travel experience.

**SecureSteps** | Reactis, MongoDb, LeafletAPI, ExpressJS, Websockets

- Architected a full-stack web application for real-time emergency location sharing using ReactJS for the front-end, Node.js with Express.js for the back-end, and WebSockets for persistent, unidirectional communication.
- Implemented location tracking and sharing functionalities, enabling users to send their real-time coordinates to law enforcement and family members during emergencies.
- Integrated Twilio's API for sending SMS alerts with critical location information to designated contacts, ensuring immediate notification.

## **Technical Skills**

**Languages**: C++, C, Javascript, Python, Typescript

Technologies: ReactJs, Nodejs, Expressjs, Websockets, Prisma, Mongodb, Tailwind, Bootstrap, MYSQL

Concepts: API, Database, OOPS, DSA

## **Achievements**

- Cleared First Round of NSEP 2021.
- Cleared the Aptitude test of Kishore Vigyan Protsahan Yojna.
- Cleared First Round of Flipkart GRID 5.0.
- Revived the Society of Environmental Engineering with my Batchmates.
- 1200+ Rating at Codeforces.

## Social Engagements

**President**: Of Socity of environmental Engineeering and Science, IIT Dhanbad

Club Member: at CYBER LABS -tech society of IIT Dhanbad

Volunteer: at KARTAVYA - NGO run by students of IIT Dhanbad to educate underprivileged childrens.

Organisor: Concetto'24 (Tech-fest).

**Sports-Engagements**: Badminton(state-level),, cricket.