

# Subhranil Raha

BTech CSE Undergraduate | Full Stack Blockchain Developer

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## Skillset

**Languages**    Javascript | Typescript | Java | C | C++ | Solidity

**Technology**    React | NextJS | Redux | Node | Spring Boot | Kafka | Express | MongoDB | Mongoose | PostgreSQL | Firebase | Git | Tailwind | Web3JS | EthersJS | Hardhat | Truffle | Geth | IPFS | HyperLedger Fabric | Docker

**Services**        Vercel | Netlify | GitHub | Render | MongoDB Atlas

**Testing**        Mocha | Chai | Sinon | Jest | Enzyme

## Projects

**GDRIVE 3.0**    Solidity | EthersJS | Hardhat | Metamask | IPFS | Alchemy | NodeJS    [Demo](#)    [Github](#)

- This is a Decentralized Application (**Dapp**) that utilizes the **Pinata IPFS** to securely store image file hashes on the blockchain.
- The application is compiled and deployed to the **Sepolia test network** with the help of **Hardhat**.
- The frontend of the application is written in **React** and interacts with the smart contract via **EthersJS**.
- To access the application, users must log in using their **MetaMask** account
- Users can also share their data with other addresses.

**CRYPTTRACKER**    WebAPI | Axios | DaisyUI | Tailwind | ContextAPI | Crypto    [Demo](#)    [Github](#)

- The web API project is designed to fetch data from the **CoinGecko API**.
- The API retrieves up-to-date information on cryptocurrency prices, market capitalization and other related data in **JSON format**.
- Users can easily navigate through the data using **pagination** and **search** features.
- In addition, the web API project also includes a **carousel** to showcase trending projects
- Also has the ability to **change themes**.

**SUBROTUBE**    JWTAuth | Firebase | MongoDB | ExpressJS | Redux | MaterialUI    [Demo](#)    [Github](#)

- SubroTube is a full-stack **MERN** application that functions as a **YouTube clone**.
- **Authentication** is done using **JSON Web Token**. Users have the option for manual signup or Google signup using **firebase**.
- After logging in, users can interact and perform **CRUD operations**. This includes the ability to **upload** videos, **like** and **comment** on content, and **subscribe** to channels.
- All data is securely stored in **MongoDB** and **Firebase**, ensuring data safety and security for all users.
- **Redux** was used to manage the entire state of the application.
- Learned how to **connect the frontend & the backend** being hosted on different servers.

**PRAGMATE**    ReactJS | Tailwind | ReactRouter | ReactQuery | ChartJS | ArtificialIntelligence | Chatbot    [Github](#)

- My team, developed this full-stack project as the finalist of **Smart India Hackathon 2022**.
- I was responsible for the **frontend development**, **UI/UX design**, and overall **architecture** of the web app.
- Our goal was to create a platform that can assist teachers in their work. The application collects and records data about students and utilizes an **AI model** to predict their future outcomes.
- The collected data is presented to the user through visually appealing charts with the help of **ChartJS**, which enhances the user experience.

**PORTFOLIO WEBSITE**    NEXTJS | Typescript | Framer Motion | Tailwind    [Demo](#)    [Github](#)

- Added my **featured projects**
- Made light and **dark modes** for my page
- Created a **file download button** that downloads the my resume
- Handled **Contact** me logic
- Implemented **animations** using framer motion
- Deployed the Nextjs web app using **vercel**

**MINTING WEBSITE**    Hardhat | EthersJs | OpenZeppelin | ERC721    [Github](#)

- Implemented the logic of **ERC721** Non Fungible Token
- Tested the smart contract using **EthersJs**
- Deployed using the **hardhat node**
- **Connected** the smart contract to a **frontend** using the **artifacts** folder

**SMART CONTRACTS**    Truffle | Web3Js | Geth | Solidity

- practised writing several smart contracts among them were **ERC20 token**, **ICO**, **ERC721** and **e-commerce** smart contract
- Learned how to use **Geth**
- Tested the smart contracts using **web3js** library
- compiled and deployed the smart contract with the help of **Truffle**

**JPA-PostgreSQL-Springboot-RestAPI**    [Github](#)

- learned how to create a server using **spring boot**
- learned how to create **Restful API** with help of **JPA** as an **ORM**
- learned how to use **docker** and use **images**
- Used **postman** to test my APIs

## Typescript-Node-MongoDB Authentication Backend [Github](#)

- Learned how to use **typescript** for backend for type safety
- Connected the Express server to MongoDB
- Created User **Model**
- Implemented Authentication **routing** and **controller**
- Created and tested the RestAPI using **Postman**

## Dockerized-Express-PostgreSQL-Backend [Github](#)

- Learned about Docker **Containerization, Hub and Images**
- Learned how to use **PostgreSQL** database in backend in a Express sever

## Kafka Producer Consumer Spring boot [Github](#)

- Implement the Producer and Consumer Example of **writing and reading from a topic** using Kafka.
- Learned how to do it using Java and Spring Boot
- Created the **broker** and **zookeeper** containers using **Docker**

## Experience and Achievements

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### Smart India Hackathon Finalist *Aug 2022 - Sept 2022*

- Worked as a Team Lead and a Frontend Developer.
- Designed the overall architecture of the application.
- Learned a lot about project management, UI/UX design, and teamwork.
- Worked under tight deadlines and showcased our solutions to the Judges.

### Blockchain Instructor Intern @IEM Labs *Sept 2022 - Dec 2022*

- Researched about blockchain development as an instructor
- Taught solidity, Defi, NFTs, ERC tokens, hardhat and ethers JS
- Assisted in updating the course structure.

### Freelance Frontend Developer *Jul 2022*

- Designed and developed the landing page, services page, and contact page for a digital agency startup (NDA) using NextJS.

### Seminar Blockchain *April 2023*

- Conducted my own seminar on Blockchain with Google Developers Student Club HITK. Taught blockchain to around 200 people.

## Position of Responsibility

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### Google Developer Club HITK Core Member *Session 2022 - 2022*

- Worked as the Full Stack Blockchain Lead
- Helped in organising several events and collaborated with other clubs.

### Geeks United HTIK Coordinator *Session 2022 - 2022*

- Worked as a college coding club coordinator
- Arranged different sessions and competitions such as hackathons and coding events

## Education

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### Heritage Institute of Technology (2020-2024)

B. Tech in Computer Science and Engineering  
GPA: 9.2

### Adamas International School (2005-2020)

Council for Indian School Certificate Examinations  
12th Percentage: 88.75%  
10th Percentage: 93.2%