# Shubham Rasal

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#### **EDUCATION**

## National Institute of Technology, Karnataka

Bachelor of Technology in Information Technology (8.54 CGPA)

Surathkal, Karnataka

May 2025

#### Professional Experience

Server Tech Intern

May 2024 – Jul 2024

Oracle Bangalore, Karnataka

- Collaborated with the **database cloud services team** to develop a workflow visualization engine **FlowGenie** that converts a **JSON schema** into a state machine, representing it as a **flowchart** with nodes and edges.
- Enhanced platform usability for the SRE team by enabling workflow editing within FlowGenie.
- Migrated parts of the existing workflow platform from **JavaScript** to **React** for improved performance and maintainability.

# Backend Engineering Intern (Remote)

Nov  $2022 - Dec\ 2022$ 

Easycompany

Bhopal, Madhya Pradesh

• Developed a secure user **registration** and **login** system with **OTP** verification and efficient **session management** using Go, incorporating **concurrency** via **goroutines** to enhance login response time by **30** %, and created a robust **document parsing library** for various file formats (PPTs, PDFs, DOCs, TXTs, XLSX).

## PROJECTS

CipherCraft | NextJS • TailwindCSS • Smart Contracts • Docker | Code | Showcase

- Engineered a Decentralised Hub for model training on access controlled private datasets.
- Automated deployment of ML model scripts by **auto-containerizing** them, **training** on a **computing network**, and saving model weights on **IPFS nodes**.
- Implemented feature to host ML models as **REST endpoints** for inference, and ensured model correctness through **zkML**.

Harveeco | NextJS • IPFS • NodeJS • PyTorch | Code | Live

- Utilized **NodeMCU** microcontrollers with sensors to collect and process real-time environmental data for accurate agricultural insights, and securely stored the data on the decentralized **Lighthouse network** .
- Applied ML algorithms to analyze stored data for predictive trends, aiding farmers in decision-making, and employed ZKML to verify model predictions, enhancing transparency and trust.

 $\textbf{Deano} \mid \textit{Nextjs} \, \bullet \, \textit{TailwindCSS} \, \bullet \, \textit{MySQL} \mid \underline{\textbf{Code}} \mid \underline{\textbf{Live}}$ 

- Developed a decentralized data annotation platform.
- Implemented a reputation-based reward system with DAN tokens to incentivize accurate data labeling, ensuring high-quality annotations.

#### TECHNICAL SKILLS

Languages: C/C++, JavaScript, Go, SQL, HTML/CSS, Solidity

Frameworks/Technologies: Next.js, React, Node.js, TailwindCSS, Git, Docker

Coursework: Data Structures and Algorithms, Operating Systems, Database Systems, OOPS

### HACKATHONS

- HackFS Won multiple track prizes for best use of tooling and innovation.
- HackBangalore Won 2nd prize in the Financial Inclusion track for building SMEasy.
- ETH India Developed a IoT + AI based solution for farmers. This project won several bounties for innovation.
- ETH Online Developed a decentralized annotation platform that won several track prizes.