Sarthak Rangari

✉ sarthakrangari788@gmail.com 📱 7219142469 🔗 in/sarthak-rangari-03a078229 ☁ sarthak-portfolio-f76d5.web.app

EXPERIENCE

Software Engineer Intern (Full Stack)
IIT Roorkee   **May 2024 - July 2024, India**
· Built the website for the APN project "**GOAL**" using **React**, HTML, CSS, and **JavaScript** to highlight activities, case studies, and workshops.
· Created **RESTful APIs** with **Django** and **MySQL**, deploying the backend on **AWS EC2** and the frontend on Vercel.
· Crafted over **10** user interfaces and **prototypes** for the website using **Figma.**
· Optimized website performance by improving **load times** by **30%** through image and query optimization, reducing HTTP requests and enabling **browser caching** using **Redis.**

PROJECTS

Automated Amazon Data Scraper Using Selenium
January 2025 -January 2025
· Developed a **Selenium**-based **web scraping** tool to extract product details (names, prices, reviews) from Amazon.
· Automated browser interactions using **Selenium WebDriver** and **XPath** for data extraction.
· Extracted data from **100+** web pages with increased efficiency.
· Utilized **Pandas** to structure scraped data and export it to an **Excel** file for analysis.

File Deduplication System Using Python
December 2024 - December 2024
· Designed a **Python**-based storage optimization system to reduce data redundancy by **60-80%.**
· Broke files into **4KB data blocks**, hashed them, and stored only unique blocks in the database.
· Achieved up to **90%** storage reduction for highly redundant text datasets using inline block-level deduplication.
· Implemented **SHA-256** for hashing each **4KB** block and used **MySQL** for efficient storage.
· Built a **Django**-based web interface for file uploads, **real-time** storage **metrics tracking**, and efficient file reconstruction.

Weelink - Social Media Platform
weelink.onrender.com · May 2024 - May 2024
· Created a **responsive** and user-friendly social media platform with HTML, **Tailwind CSS**, JavaScript, **Django**, and **PostgreSQL**.
· Integrated features like Post, Share, Like, Comments and customizable profiles.
· Implemented **real-time** messaging using **Django Channels** and **WebSocket**, along with secure user authentication.
· Deployed the platform on **AWS EC2** with **Docker**, **Kubernetes**, and a **Jenkins**-powered **CI/CD** pipeline.

Tribal Development Index Calculator
tdi.onrender.com · September 2023 - January 2024
· Developed a web tool to calculate the Tribal Development Index (**TDI**) for **Jharkhand's** tribal communities using **Django**, **MySQL**, HTML, CSS, and **JavaScript**.
· Processed a survey dataset of over **5,000 entries** with **Pandas**, improving calculation speed by **30%** and reducing data processing time by **50%**.
· Generated interactive **visualizations** with **Chart.js** and deployed the tool on an **AWS EC2** instance for scalability and performance.

EDUCATION

Bachelor of Technology (BTech) in Mechanical Engineering
Indian Institute of Technology (IIT) Roorkee · India · 2025

SKILLS

Programming Languages: Python, Java, C++, JavaScript
Development: Django, React, HTML, CSS, Restful APIs
DevOps: Docker, Kubernetes, Jenkins, AWS, CI/CD, Git, GitHub
Databases: MySQL, PostgreSQL, MongoDB, Redis, SQL, NoSQL
Other: Data Structures and Algorithms, Figma, UI/UX Design, Selenium, OOPs