Satyam Rahangdale

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Education

Indian Institute of Technology Kharagpur, India 2022 - 2026
Bachelors of Technology in Chemical Engineering CGPA: 8.63/10.0

Chakraborty Public School, Baihar, India 2021 - 2022
Higher Secondary Education, MPBSE Percentage: 89.40%

Kendriya Vidyalaya Malanjkhand, India 2019-2020
Secondary Education, CBSE Percentage: 94.20%

Internship and Projects

ExploreIt | Web Application | Self-Project Jun'24 - July'24
HTML5, CSS, JavaScript, EJS, NodeJs, MongoDB, ExpressJS, REST API Github link

- Developed a web application using **MERN** stack to facilitate seamless bookings for villas, hotels, and bungalows.
- Configured front-end using EJS templating engine, leading to up to 60% reduction in initial load time.
- Effectively utilized **Express.js** for back-end API management, resulting in a 50% improvement in response time
- Integrated **Node.js** for front-end to **MongoDB** connection, achieving reduction in data transaction latency by 30%

CDC Noticeboard | IIT KGP CDC Notice Scraper | Self Project Mar'25 - Apr'25
Node.js, Web automation, Puppeteer, Ntfy, Gmail API, Axios, MongoDB Github link

- Built a Node.js service with Puppeteer to deliver **real-time** CDC notices from IIT KGP's portal within **1 minute**.
- Pushed real-time alerts via **Ntfy**, ensuring instant delivery of critical updates and preventing missed **deadlines**.
- Leveraged Gmail API to **automate ERP login**, removing the need for manual credential and OTP entry.
- Implemented robust **error handling** and retry logic to ensure system **stability**, fault tolerance, and continuous **uptime**.

Snake and ladder (Link) | Web-based Game | Self Project May'24
HTML5, CSS, JavaScript, DOM Manipulation, CSS Animation Github link

- Developed a fully interactive classic Snake & Ladder board game playable in the browser.
- Implemented smooth player movement using dynamic `grid` positioning, and enhanced UX with animated 3D dice roll effects using CSS transforms and keyframes.
- Built modular JavaScript logic to simulate dice rolls, manage turn-based movement, detect win conditions, and handle snake/ladder transitions.

Binary Tree Visualizer (Link) | Web Application | Self Project May'24
HTML5, CSS, JavaScript, GoJS Github link

- Developed an interactive *binary tree visualizer* to assist in solving and **debugging** binary tree related problems from platforms like *GFG* and *LeetCode*.
- Reduced the **debugging** time up to **70%** by providing real-time visualization of complex tree structures.
- Implemented Breadth First Search(BFS) algorithm to construct binary trees from input arrays using the *GoJS* library.

Competitions

Interspeech 2025 | ISCA's flagship international conference | Results awaited Mar'25 - April'25
(Transformers, React Js, Flask, Collab, Ngrok, MongoDB) Github link

- Co-developed ***ASR-FairBench***, a real-time benchmarking platform evaluating **fairness and accuracy** in Automatic Speech Recognition (ASR) LLMs .
- Proposed a novel metric — **Fairness-Adjusted ASR Score (FAAS)** — combining Word Error Rate (WER) and statistical fairness across demographic groups.
- ***ASR-FairBench*** features **interactive visualizations** (box plots, histograms) and a **real-time leaderboard** to enable seamless comparison across multiple ASR models
- **Optimized** the pipeline to **evaluate and visualize results within 30 minutes**, enabling rapid feedback for researchers and developers
- **Aligned** with Interspeech 2025's central theme of *Fair and Inclusive Speech Science and Technology*

Technical Skills

Languages: Proficient: C++, JavaScript, CSS
Intermediate: Python, C, Typescript
Software and Tools: VS Code, GitHub, Matlab, Collab
Database: MongoDB
Libraries/Frameworks: React.js, Node.js, Express.js, Flask, PrimeReactUI, Tailwind CSS, Bulma CSS, REST API
Skills: DSA, Machine Learning, Full Stack Development, Competitive Programming

Achievements

- Secured an **All India Rank** of **8459** in **JEE (Advanced) 2022** among **140k+ candidates**, demonstrating **strong analytical** and **problem-solving skills.**
- Secured a **Percentile** of **98.47** in **JEE (Main) 2022** surpassing **1M+ candidates**, showcasing **strong aptitude and reasoning.**
- Secured **1st** place at the school level in the CBSE board exam by excelling in all subjects and demonstrating strong academic discipline.

Relevant Coursework

Undergraduate Courses: Programming and Data Structure (T / L) | Transform Calculus | Advanced Calculus | Linear Algebra
Core CS Courses: Object-Oriented Programming (OOPs)