Sarthak Kumar

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech. Major	Indian Institute of Technology, Guwahati	7.17 (Current)	2021-Present
Senior Secondary	CBSE Board	92.6%	2020
Secondary	CBSE Board	88.6%	2018

EXPERIENCE

- **Remarkskill** *December 2024 - February 2025*
  SDE Intern Remote
  - Migrated a legacy WordPress website to the **MERN stack (MongoDB, Express.js, React.js, Node.js)** with **Next.js**, significantly improving performance, scalability, and maintainability, while enhancing security and user experience.
  - Designed and built a secure **certificate verification portal** and user dashboard with real-time progress tracking, increasing user engagement and satisfaction by **25%** and reducing verification time by **30%**.
  - Rebuilt the frontend with **React**/**Next.js** and backend APIs using **Express.js** and **MongoDB**, reducing load times by approximately **40%** and deploying the solution using advanced **virtualization** and **cloud technologies**.

- **Abhigyan Academy** *April 2024 - July 2024*
  SDE Intern (Backend and Frontend) Guwahati
  - Contributed significantly to developing a interactive full-stack web application using **React.js**, **Express.js**, **Node.js**, and **MongoDB**, resulting in a **40%** increase in user engagement and a **30%** improvement in average session duration.
  - Developed and implemented **8+** **interactive pages** and efficiently optimized existing content, leading to approximately **50%** faster page load times and significantly improved **mobile responsiveness** across all devices.
  - Conducted comprehensive end-to-end backend testing using **Postman**, ensuring **API reliability** and **performance**.

PROJECTS

- **HealthCare Management System** *November 2024 - December 2024*
  Team Project GitHub
  - Developed a healthcare management application using **Next.js**, **TypeScript**, **TailwindCSS**, and **ShadCN**. It offers comprehensive features for patient registration, appointment scheduling, and medical appointment management.
  - Administrative features for scheduling, confirming, and canceling appointments, with **SMS notifications** via **Twilio**.
  - Integrated **secure file storage** with **Appwrite** for storage of medical and patient records maintaining privacy.

- **IMAGE-AI** *February 2025 - March 2025*
  Personal project GitHub | Web-App
  - Utilized **OpenAI API** to enable image generation through personalized prompts. Users can share their creations in a community gallery, displaying images alongside creators' details and prompts, with a download option.
  - Built with **React** for a engaging and responsive front-end and **Express.js** for a robust back-end. Utilized **MongoDB** for scalable and secure data storage. Integrated **Cloudinary** for seamless media optimization and delivery.

- **Custom Database Implementation (Go)** *January 2025*
  Personal Project GitHub
  - Developed a custom file-based database, capable of **CRUD operations** with JSON-formatted records, optimized with a **mutex mechanism** to ensure thread safety during concurrent access so that efficiency can be improved.
  - Implemented functions for writing, reading, and deleting records, **handling nested structures**, and efficient logging.
  - Database handles collections and resources efficiently, providing a flexible solution for various data storage needs.

TECHNICAL SKILLS

Programming Languages: C/C++, JavaScript, SQL
CS Fundamentals: DBMS, OOPs (Object-Oriented Programming), Operating Systems, Computer Networks, System Design, Relational Databases

Web Technologies: React.js, Node.js, Next.js, MongoDB, ShadCN, Zod
Miscellaneous: Docker, Kafka, Cloud technologies(AWS), Postman

KEY COURSES TAKEN

- **Node.JS**: Backend Development with Node.js under Student Web's Committee(SWC) IITG
- **HTML/CSS/JavaScript/React.JS**: Completed workshop under Student Web's Committee(SWC) IITG
- **Computer Science**: Introduction to Computing, Computing Laboratory, Computational Chemistry

ACHIEVEMENTS AND EXTRACURRICULAR

- **CodeChef**, secured global rank **128** in Starters 145 Div 3. Maximum Rating: **1633**
- **Codekaze Sept. 2023**, Achieved All-India Rank **283** out of **150,000** students in Round **2** of the competition.
- **Undergraduate Senator**, Actively advocated for 5000+ UG students by identifying and addressing their issues.
- **Branch Representative**, enhanced student-professor interaction, addressed issues, and guided peers effectively.
- **RungMunch**, Achieved **1st** in inter-hostel roasting competition by showcasing quick wit and creativity.