Sahil Tyagi

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EDUCATION

- **Indian Institute of Technology** — Guwahati, India
  Master of Technology: CE : GPA: 7.8 — *July 2022 - July 2024*

- **University Institute of Engineering and Technology** — Kanpur, India
  Bachelor of Technology: CE : CPI: 6.85 — *July 2017 - July 2021*

SKILLS SUMMARY

- **Languages**: C++, Python, JavaScript, TypeScript, SQL
- **Frameworks/Library**: React.js, Express.js, Tailwind CSS
- **Databases**: MongoDB, MySQL, PostgreSQL
- **Toolset**: Git, GitHub, Node.js, HTML5, CSS, Postman, VS Code, Socket.IO, WebRTC
- **Platforms**: Windows, AWS
- **Other Skills**: Design Patterns , SOLID, Analytical , OOPs, Debugging, Troubleshooting

EXPERIENCE

- **Edify.Club by Winuall** — Bangalore
  Back-end Developer Intern — *Jan 2025 - Present*
  - **Scalable Software and E-Commerce Development**: Contributed in a **high-performance asset management system** and an **e-commerce platform**, scaling to serve **10,000+ users** efficiently.
  - **Optimized Search & Request System**: Implemented an **intelligent laptop search** feature with MongoDB and Slack-integrated requests, reducing manual intervention by **80%**.
  - **High-Performance API & Caching**: Utilized **MongoDB aggregation pipelines** and Redis caching, cutting API response time by **40%** and reducing database queries by **60%**.
  - **Secure User Management & Bulk Operations**: Enhanced bulk deletion by preventing removal of assigned users, maintaining **100% data integrity** and reducing accidental deletions by **90%**.
  - **Checkout Optimization**: Integrated MongoDB with Razorpay, increasing checkout conversions by **15%**.

- **Prodigy Infotech** — Remote
  Web Developer (Internship) — *April 2024 - May 2024*
  - **Immersive Web Applications**: Developed 4 applications creating **responsive** and visually engaging experiences.
  - **User Engagement Boost**: Improved usability by 30% through interactive elements, including navigation menus and interfaces for a stopwatch and tic-tac-toe game.
  - **Real-Time Weather**: Provided 7-day archive of historical data, enhancing user information access by 25%.
  - **Global Coverage**: Enabled weather access for over 1,000 cities worldwide and ZIP codes across the EU, UK, and US.

PROJECTS

- **Financer**
  IIT Guwahati
  - **Finance Dashboard App**: Developed with **MERN stack**, featuring 8+ technologies **Recharts, Redux, TypeScript, Material UI** for interactive data visualization with 5+ chart types.
  - **Real-Time Transactions**: Displays 50 recent transactions with live updates using **Redux Toolkit.**
  - **Revenue Prediction**: : Integrated 3 machine learning models **Regression.js** to forecast next year's revenue using **Node.js, Express, and Mongoose** (Feb'24 - Apr'24).

- **Gericht**
  IIT Guwahati
  - **Responsive Restaurant Website in React**: Rolled out a visually engaging site with 10+ high-quality visuals and a immersive dining video, along with a streamlined, interactive menu to captivate visitors.
  - **User-Centric UI/UX Design**: Created an intuitive flow across 3+ core sections, enhancing user experience and boosting customer engagement with an accessible, interactive interface.
  - **Mobile-First Optimization**: Applied mobile-first principles, ensuring seamless experiences on all devices, with features like newsletter signup to foster ongoing customer connections. (July '23 - Aug '23)

- **CPU Simulation**
  IIT Guwahati
  - **C++ Scheduling Library**: Built a simulation library for 5 key **Operating System scheduling algorithms (FCFS, RR, SPN, SRT, HRRN)** to evaluate performance metrics.
  - **Performance**: Enabled 4 core metrics—arrival, burst, finish, and turnaround times for in-depth analysis.
  - **Optimized Process Management**: Leveraged **OOP principles** and data structures to create a modular, reusable **C++ library**, promoting efficient scheduling decisions and system resource management. (May '23 - June '23)

ACHIEVEMENTS

- **500+**: Data Structures and Algorithms problems completed including Leetcode and GFG.
- **Open Source**: Contributor and actively participated over Hackathons to resolve real world problems.