Garvit Choudhary

Sikar, India — 7300209899 — garvitchoudhary.sde@gmail.com — [LinkedIn](#) [Github](#)

Education

Indian Institute of Technology Roorkee, Roorkee *Oct 2022 – Present*
B.Tech in Electrical Engineering

Internships

Frontend Developer, Core Data Pvt. Ltd., Noida *May 2024 – Jun 2024*

- Utilized **React.js, JavaScript, and REST APIs** to build high-performance web-pages
- Developed a real-time dashboard to monitor water usage and levels with updates every **5** seconds
- Enhanced frontend performance by **60%**, improving page load speed from **4** seconds to **1.5** seconds
- Optimized **50+** API calls, reducing data-fetch latency by **35%** and improving user experience
- Collaborated with **5** developers to deliver the MVP 1 week ahead of schedule

Projects

Data Compression and Decompression Portal *July 2024 – Aug 2024*

- Built a **full-stack web app** for file **compression/decompression** using **3 algorithms** (Huffman, RLE, LZ77), achieving up to **70% size reduction**.
- Developed **6+ RESTful APIs** with **Node.js & Express**, and integrated a **React.js frontend** for file upload, algorithm selection, and real-time **compression statistics** display.
- Supported **10+ file types** with **custom error handling**, enabled **file downloads**, and provided **algorithm explanations** for enhanced user understanding.

Digital Menu *Dec 2023*

- Developed a MERN-based online ordering platform with **JWT authentication** and dynamic menu handling.
- Enabled **10+** category filters and cart management functions, improving user engagement by **30%**.
- Integrated Stripe for payments and optimized the UI, reducing dish selection time by **25%**.
- Built AI chatbot using Google Gemini API for dish suggestions and real-time order tracking.

Power Flow Analysis *Jan 2025 – Mar 2025*

- Developed a **C++** simulation for islanded microgrid load flow using the Modified Newton-Raphson method.
- Incorporated droop-controlled generators and ZIP load modeling for high simulation fidelity.
- Leveraged **Eigen** and standard libraries for optimized matrix operations and performance analysis.
- Validated simulation results on **6-bus** and **38-bus** systems, closely matching **PSCAD** benchmarks.

Skills

- **Programming Languages:** C++, JavaScript, TypeScript
- **Frontend Technologies:** HTML, CSS, React.js
- **Backend Technologies:** Next.js, Node.js, Express.js, MongoDB, MySQL, PostgreSQL, REST APIs, JWT, Socket.io
- **Other Tools:** Git, Github, Visual Studio Code (VS Code), Microsoft Office (Excel, Word, PowerPoint)

Leadership

Cultural Secretary, Radhakrishnan Bhawan, IIT Roorkee *Sep 2024 – Present*

- Organized Bhawan Day on 16th April,2025 with a team of **7** secretaries, managing logistics for **900+** attendees including the Chief Guest, and ensuring smooth event execution with positive feedback