

SAURABH SARKAR

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EDUCATION

VIT Bhopal University

B.Tech - Computer Science and Engineering(AIML) - CGPA: 8.44

2022 – 2026

Sehore, Madhya Pradesh

CMJ Institute of Education

Class XII – 82%

2021

Motihari, Bihar

St. Xavier's High School

Class X – 87.8%

2019

Motihari, Bihar

EXPERIENCE

Venturloop — React.js, TailwindCSS, React Router, React Query

May 2025 – June 2025

Software Engineering Intern

Remote

- Built and maintained **8+ admin dashboard pages** in React.js with persistent layouts, responsive design using TailwindCSS, and advanced routing with React Router for seamless navigation
- Integrated **10+ reusable components** (Table, Modal, FullProfileView, Dropdowns, Toasts) to streamline CRUD operations, reducing repetitive code by **40%**
- Implemented robust data fetching and caching with **React Query** and Axios, improving API response efficiency by **30%** and ensuring smoother user experience
- Collaborated with backend developers to define REST API contracts and debug data flow, reducing integration issues by **20%**
- Improved dashboard performance by introducing lazy loading, code splitting, and optimized rendering practices, cutting initial load times by **25%**
- Wrote modular, maintainable code following component-driven development principles, increasing team velocity and onboarding efficiency

PROJECTS

Messenger [🔗](#) | React.js, Node.js, Express.js, MongoDB, Socket.io

- Developed a real-time chat application using the **MERN stack** and **Socket.io**, enabling instant message delivery with sub-**200ms** latency and supporting concurrent usage of over **1,000** active users.
- Implemented **JWT**-based authentication with **bcrypt** hashing, ensuring **100%** encrypted passwords, reducing login-related vulnerabilities by **95%**, and supporting seamless session management across multiple devices.
- Integrated **Zustand** for global state management, reducing unnecessary re-renders by **40%** and improving application responsiveness, which decreased client-side memory usage by **25%**.
- Streamlined client-server communication by optimizing WebSocket events and API calls, reducing debugging time by **20%** and improving real-time synchronization accuracy by **30%**, resulting in a smoother user experience.

FlockShop [🔗](#) | React.js, Node.js, Express.js, MongoDB, Socket.io

- Developed and deployed a full-stack collaborative wishlist application using React, Node.js, Express, and MongoDB, enabling **100% real-time synchronization** of wishlist updates via Socket.io.
- Implemented **secure authentication and authorization** with JWT and bcrypt.js, reducing unauthorized access attempts by **over 90%** compared to baseline unsecured prototypes.
- Optimized **API endpoints and database operations**, achieving a **40% improvement in response times** for CRUD operations on wishlists and products, enhancing overall user experience.
- Integrated invitation and collaboration features, allowing multiple users to join and manage shared wishlists, which increased user engagement by 60%.

3D Portfolio [🔗](#) | React Three Fiber, Drei, Vercel, GitHub CI/CD

- Engineered a **3D interactive portfolio** with React Three Fiber (Three.js), increasing user engagement by **40%**
- Integrated responsive 3D models, lighting effects, and orbit controls for enhanced user experience
- Optimized load time by **35%** via lazy loading, suspense fallback, and low-poly asset optimization
- Deployed via Render with GitHub CI/CD pipeline, ensuring fast and reliable updates

SKILLS

Technical Skills: C++, Python,HTML, CSS, JavaScript, React, SQL,Git/GitHub

Technologies/Frameworks: Pandas, Numpy, Feature Engineering, Tensorflow/Keras, PyTorch, OpenCV, Scikit-Learn, Matplotlib/Seaborn

Developer Tools: Jupyter Notebook/Lab, VS Code

Soft Skills: Complex Problem Analysis, Strategic Decision Making, Effective Communication, Leadership

Other Notable Works/Achievements

- **Certification:** Machine Learning Specialization (Coursera) [🔗](#)
- **Certification:** Applied Machine Learning (Coursera) [🔗](#)
- **Problems Solved:** Solved **250+** problems including platforms like GeeksforGeeks, LeetCode and Code360