

SAURABH BAKOLIA | 20HS20049

ECONOMICS (M.Sc. 5Y)



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2025	M.SC(5YR)	IIT Kharagpur	7.18 / 10
2019	Class-XII (RBSE)	Rajat Vidhyapeeth Sr Sec Sch, Jat Colony, Sikar	80.40%
2017	Class-X (RBSC)	Govt Prakash Sec Sch, Ratangarh	93.33%

INTERNSHIPS

Front-end Engineer | SyncMOF

[May'24 - July'24]

- Led front-end of the Black Box project using ReactJS and Tailwind CSS, ensured scalable UI and streamlined deployments with CI/CD and AWS Amplify.
- Architected a robust UI/UX and wireframe for a platform with Figma and leveraged AWS Amplify Auth and managed cloud resources with CloudWatch.
 Optimized complex flows using React Flow to enhance efficiency and user experience and implemented AWS CloudTrain for workflow and management.
 Collaborated on scalable architecture with Docker and AWS, including Elastic Beanstalk and Amplify and used AWS CloudWatch to improve system.

Full-stack Developer | Darzee

[Oct'23-Feb'24]

- Developed and optimized Java Spring Boot APIs at Darzee, ensuring high performance and scalability with PostgreSQL and microservices integration.
- Implemented multi-outfit, multilingual features in the Darzee **Flutter** app using **Dart**, enhancing performance and UX, leading to gain 20% retention boost.

 Developed and maintained robust backend systems using **Java Spring Boot** and **TRPC**, utilizing **AWS S3** for data storage and ensuring scalable solutions.
- Created Python scripts, automated execution with Linux cron jobs, and fully integrated Firebase for advanced user management and OTP verification.

Full-stack Developer Intern | Noccarc Robotics

[May'23 - Sep'23]

- Engineered a full-stack admin dashboard with ReactJS and Redux for V730i ventilator OTA updates and leveraged WebSocket for real-time updates.
 Deployed backend on AWS EC2, using Node/Express and Multer for file uploads, and AWS SDK S3 for secure and scalable storage of system versions.
 Implemented REST API and JWT authentication to ensure robust and secure communication between the admin dashboard and ventilator machines.
- Engineered a CMS mobile app for patient monitoring with React Native and utilized WebSocket, Redux, and Kafka, and neatly implemented REST API.

Full-stack Web Developer | Hippiees

- Optimized the Visa Service Portal Website using PHP and MySQL, achieving a 10% boost in performance, 5% increase in accessibility, and 7% gain in SEO.
- Led deployment via FileZilla and Apache, ensuring smooth integration and maintained comprehensive technical documentation for future enhancements. - Improved user experience by refining responsive design, updating the UI, and reducing load times by 15%, resulting in a more efficient and accessible site.

Frontend Web Developer | Leads4Needs

- Engineered responsive front-end for a business directory and job portal using Next.js and Tailwind CSS, enhancing user experience and performance.
- Implemented JWT for secure authentication and developed 40+ reusable components with React.js and Next.js, ensuring code modularity and scalability.
- Conducted testing and debugging for cross-browser compatibility and mobile responsiveness, ensuring a seamless user experience across various devices.

WORK EXPERIENCES

Open-Source Contributor | Kharagpur Winter of Code

[Nov'22 - Feb'23]

- Collaborated with contributors on the development of the Global Weather web application, leveraging the tech stack of **HTML**, **CSS**, **Pug**, and **JavaScript**.
 Made notable contributions to codebase by adding over **2.k+** lines of code, utilized **Git/GitHub** for version control, ensured code management and reviews.
 Seamlessly integrated the Realtime OpenWeatherMap **API** to retrieve current weather data, utilizing **Node.js/Express.j**s and asynchronous processing.

Software Engineer | Freelance

- Developed browser-based applications for the manufacturing sector startup using **React.js**, **TypeScript**, **Material UI**, and **Jotai**, enhancing user interfaces. Implemented backend functionality with **Prisma ORM** and **SQL**, integrating **PostgreSQL** for robust data management and utilizing **TRPC** for API dev.
- Utilized the Hoops library for 3D CAD visualization and optimization, with Docker for containerization and AWS for cloud, ensuring streamlined process.

PROJECTS

E-Commerce Website | Self-Project

- Developed an e-commerce shopping cart application using React, Styled Components, and MongoDB, with response time of under 200 milisec. Leveraged ReactJS, Redux, resulting in a 13% reduction in overall application size and a 30% improvements in rendering performance speed.
- Used React Router Dom for navigation, enabling users to effortlessly transition between pages, an average page load time is less than 2 sec.

Authentication System | Freelance Project

- Designed and implemented a adaptable and reusable authentication system for website security, used ReactJS, TypeScript, and Material UI.
- Integrated JSON Web Tokens (JWT) into the authentication system to ensure secure, encrypted communication between clients and backend APIs.

Real Time chat App | Self-Project

- Developed a real-time chat application utilizing **Node.js**, **Express**, and **Socket.io** on the backend, **HTML**, **CSS**, and **JavaScript** on front-end. Integrated **Firebase database** for real-time data fetching and storage, ensuring seamless synchronization and efficient management of chats.

COURSEWORK INFORMATION

Computer Science & Mathematics: Programming & Data Structures* | Advancedd Calculus | Probability & Statistics | Partial Differential Equations | File Organization and Database Systems* Economics: Econometric Analysis II* | Econometric Analysis II* | Financial Management

SKILLS AND EXPERTISE

Languages: C | C++ | PHP | SQL | Python | HTML | CSS | JavaScript Frameworks: Node.js | Next.js | Nest.js | WordPress | Material-UI | FastAPI Developer Tools: Git | Github | AWS | VS Code | Visual Studio | Jira | Agile | Scrum Libraries: React.js | React Native | Redux | pandas | NumPy | Matplotlib

POSITIONS OF RESPONSIBILITY

General Secretary - Social and Cultural | Homi Jehangir Bhabha Hall of Residence

[Session 2022-23]

- Represented over 160 boarders of HJB Hall of Residence at Gymkhana's Social & Cultural Subcommittee, Supporting the hall and its interests.
 Managed the annual budget of over INR 1,8 Lakh for social and cultural activities at Homi Jehangir Bhabha Hall of Residence, IIT Kharagpur
 Handled the logistics of 12 events in the Social Cultural Gymkhana Championship and 4 Open IIT competitions for the 2022-2023 session.
- Ensured practice and participation of Hall boarders in Social &Cultural GC and organized multiple events and workshops like illumination.