

# RAHUL KUMAR BHARTI

Ghazipur, Uttar Pradesh 233300

+91 7618805084 [rahul.kbharti2002@gmail.com](mailto:rahul.kbharti2002@gmail.com) [linkedin.com/in/rahul-kbharti](https://www.linkedin.com/in/rahul-kbharti) [github.com/rahulkbharti](https://github.com/rahulkbharti)

## EDUCATION

Rajkiya Engineering College, Ambedkar Nagar

Bachelor of Technology in Information Technology – CGPA: 8.0 / 10

July 2025

Akbarpur, Uttar Pradesh

## TECHNICAL SKILLS

**Programming Languages:** C, C++, JavaScript (ES6+), TypeScript, Python

**Frontend:** React.js, Next.js, Redux, Tailwind CSS, HTML5, CSS3

**Backend:** Node.js, Express.js, Django, REST API development, JWT/OAuth

**Databases:** MongoDB (NoSQL), MySQL (SQL)

**Cloud Platforms:** Google Cloud (Basics), Microsoft Azure (Basics), Docker, GitHub Actions

**Testing & Tools:** Vitest (Jest-compatible), Postman, VS Code, Git, GitHub, Figma

## EXPERIENCE

Ekalsutra Edtech Pvt. Ltd. [🔗](#)

October 2023 – December 2023

Web App Development Intern

Akbarpur, Uttar Pradesh

- Developed a **responsive admin dashboard** using **React.js**, **Material UI**, and **Redux Toolkit**, translating Figma designs into pixel-perfect UI components with **95% design fidelity**.
- Optimized data flow by integrating **REST APIs with React Query**, reducing unnecessary re-renders by **30%** through intelligent caching strategies.
- Implemented **15+ form workflows** using **Formik & Yup**, decreasing validation errors by **25%** and improving form completion rates.
- Secured application routes with **JWT authentication**, implementing token validation and protected routing.
- Conducted comprehensive API testing with **Postman** (50+ endpoints) and wrote **unit tests (Vitest)** covering **80%+** of critical components.
- Collaborated in **Agile team** using **Git/GitHub**, maintaining **100%** code review compliance.

## PROJECTS

**Library Management ERP Solution** [🔗](#) | Node.js, Express, MySQL, JWT, OAuth 2.0, RBAC, Reactjs

July 2025

- Architected a **full-stack solution** with **React.js + Material UI** frontend and **Node.js/Express** backend serving **3 user roles** (Admin/Staff/Member).
- Implemented **secure authentication** using **JWT + Google OAuth 2.0** with **redux-persist** for session management.
- Designed normalized **MySQL database** with organization-based isolation and **40+ RBAC permissions** controlled via admin dashboard.
- Developed 15+ **Formik forms** with **Yup validation** and **Axios** interceptors, improving data submission accuracy.
- Optimized state management using **Redux Toolkit**, encrypted and stored in local Storage
- Established CI/CD pipeline with **Vitest** testing and **Winston** logging for production monitoring.
- [Live Demo](#) | [GitHub](#)

**Real Time Video Chat App** [🔗](#) | WebRTC, Socket.io, Custom Hooks (useMedia + useWebRTC)

January 2023

- Built an Omegle-like video chat app using **React**, **Node.js**, and **WebRTC**, enabling real-time peer-to-peer connections with **Socket.io** for secure SDP exchange.
- Implemented **interest-based matching** with a queue system and **semaphore locks** to prevent duplicate connections and ensure 1:1 pairing.
- Developed custom hooks (**useWebRTC**, **useMedia**) to streamline WebRTC setup, media handling, and error management.
- [Live Demo](#) | [GitHub](#)

**M3U8 Video Streaming App** [🔗](#) | FFmpeg, Azure Blob Storage, MongoDB, HLS.js, Nodejs(Child Process)

August 2024

- Developed an adaptive M3u8 streaming service using **Node.js**, **FFmpeg**, and **Azure Blob Storage**, leveraging child processes for non-blocking video transcoding into **multiple resolutions**.
- Implemented **dynamic M3u8 playlist generation** with **signed URLs** and expiry times, **MongoDB** for metadata storage, and **Socket.io** for real-time encoding status updates.
- Designed a responsive frontend with **HLS.js** and **Plyr.js** for seamless playback, including **video preview thumbnails** and adaptive bitrate switching.
- Automated CI/CD on Render with **Github Action** and **Docker**, slashing deployment time by 60%.
- [Live Demo](#) | [GitHub](#)

## ACHIEVEMENTS

- Top 0.5% in TCS CodeVita (among 400K+ participants). [view](#)
- Completed 87+ hands-on labs, 27 courses, 23 quizzes, 7 gamified learning modules, and 3 structured learning paths on Google Cloud.