

Kumar Vaibhav

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Education

- **BTech. CSE (Specialization in Health Informatics)** *VIT Bhopal University (October 2022 – Present)*
 - Currently Pursuing (Final Year)
 - **CGPA:** 8.55
- **Delhi Public School Newtown, Kolkata** *Class 10: 91.6% (2020), Class 12: 82.4% (2022)*

Skills

- **Programming Languages:** HTML, CSS, JavaScript, Java
- **Technologies & Frameworks:** React, Next.js, Node.js, Express, MongoDB, TailwindCSS, Bootstrap, WebSockets
- **Tools:** Postman, Git, GitHub, Docker, Redux Toolkit, Figma, Vercel, Render, ShadCN, Framer

Experience

- **Hackothsava'24 (Frontend Developer / Team Lead)** *SMVITM, Karnataka (July 2024 – September 2024)*
 - Built a CCTV Monitoring System to detect vehicle accidents using a custom-trained ML model with 92% accuracy.
 - Designed a real-time web interface displaying geo-tagged accident events with severity filters, heat intensity overlays, and interactive charts for operational decision-making.
 - Finalist among 100+ teams for integrating real-time AI with a data-driven UI for public safety innovation.

Technical Projects

- **Scribbly (Full Stack Project)**
 - Assembled a real-time collaborative whiteboard with chat and cursor sharing for up to 50 users (<100ms latency), enabling freehand drawing with smooth path tracking, undo support, and event synchronization via Socket.IO.
 - Integrated Keycloak-based authentication with Docker orchestration to ensure secure, scalable access across private and public collaboration rooms, supporting 10+ concurrent active sessions.
 - Enabled dynamic canvas resizing and save-as-PDF with cross-device compatibility to enhance collaboration; containerized frontend/backend using Docker, improving scalability and reducing setup time by 40%.
 - **Tech Used:** React, Node.js, Express, TypeScript, Bootstrap, Socket.IO, HTML Canvas API, Keycloak, Docker
 - **GitHub:** <https://github.com/kvaibhav114/scribbly-whiteboard>
- **Expenzo (Full Stack Project)**
 - Developed a comprehensive financial management web app with 10+ visualizations to track incomes and expenses, visualize spending, and generate actionable insights with multi-factor authentication.
 - Created a custom PDF/Excel parser using Node.js streams to process financial documents with 95% data extraction accuracy, automatically extracting and categorizing transaction details for user convenience.
 - Deployed CI/CD pipelines via GitHub Actions & Vercel, cutting release cycle time to under 20 minutes
 - **Tech Used:** Next.js, Tailwind CSS, Neon Postgres, Drizzle ORM, Clerk Auth, ShadCN
 - **GitHub:** <https://github.com/kvaibhav114/expense-tracker>

Achievements

- Selected among the top 10 teams out of 200+ entries at the **Prod-E-G Hackathon 2023**, organized by DSEU University, Guna, for developing the **NurtureWise Agro Project** as an innovative agricultural tech solution. Certificate
- Finalist at **Rajasthan Police Hackathon 2023**, for developing a **CCTV Monitoring System** capable of detecting road accidents and reducing false positives by 40% through an advanced anomaly detection model. LinkedIn Post

Certifications

- **MERN Full Stack Certification** (Ethnus, 2025)
- **The Bits and Bytes of Computer Networking** (Coursera, 2023)
- **Frontend Developer (React)** (Hackerrank, 2025)