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)