Kumar Vaibhav

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Education

VIT Bhopal University (2022 – Present)
BTech. Computer Science and Engineering (Health Informatics Specialization)
- **CGPA:** 8.50

Skills

Programming Languages: Java, JavaScript, Python, HTML, CSS
Technologies & Frameworks: React, Node.js, Express, SQL, MongoDB, TailwindCSS, WebSockets
Tools: Git, GitHub, Postman, Docker, Agile, Testing, Redux Toolkit, TanStack Query, REST APIs
Other Concepts: Data Structures, Algorithms, Object-Oriented Programming, Software Development Lifecycle

Experience

Frontend Developer Intern (Remote, May 2025 – Present)
Spark, a US-based energy tech startup
- Built interactive frontend modules using **React, D3.js, ShadCN, Radix UI**, with client-side routing and state handling via **React Query**, enabling seamless delivery of 10+ real-time energy metrics.
- Integrated live analytics dashboards for energy metrics across 5+ zones, using insights from the ML team.
- Led frontend-backend integration and supported production deployment via AWS S3 + CloudFront.

Technical Projects

Scribbly (Collaborative Whiteboard App) Link
- 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.
- 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

Expenzo (Cloud-Based Expense Tracker) Link
- 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

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
- Engineered a **CCTV Monitoring System** using an advanced anomaly detection model to detect road accidents and reduce false positives by 40%, earning finalist position at **Rajasthan Police Hackathon 2023**. LinkedIn

Extracurriculars

Public Relations Head, Android Club, VIT Bhopal (May 2023 – Jun 2025)
Led community outreach and managed promotions for 10+ campus-wide tech events, boosting engagement and participation.

Certifications

MERN Full Stack ↗ | **Bits and Bytes of Computer Networking** ↗ | **Frontend Developer (React)** ↗