

Harshal Bhandari

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PROFESSIONAL SUMMARY

Technical Lead and Senior Frontend Engineer with **8+ years of experience** architecting and scaling distributed web and mobile systems across E-commerce, Travel, and Agritech domains for millions of users. Expert in modernizing legacy monoliths into **high-performance frontend and BFF architectures using Next.js, TypeScript, GraphQL and REST APIs**. Proven track record of leading cross-functional teams, contributing to **Series A funding**, and driving operational efficiency at scale. Strong expertise in video engineering, CI/CD automation, SEO, and mobile application performance.

SKILLS

Frontend Architecture: React.js, Next.js, React Native, TypeScript, HTML, CSS (Tailwind, MUI).

Backend & API: Node.js, Express, Python (FastAPI), GraphQL (BFF), RESTful APIs.

Databases & Storage: MongoDB, MySQL (Schema Design)

Video & Media Engineering: FFmpeg, Agora SDK, AWS SQS (Queues), HLS Streaming, Image Optimization.

Cloud & DevOps: AWS (Lambda, S3, EC2), GCP, Docker, Kubernetes, Nginx, GitHub Actions, Fastlane, Turborepo (Monorepo), Prerender.io.

Testing & Tooling: Jest, React Testing Library, Storybook, Lerna, Verdaccio, Webpack, Vite.

Observability: Mixpanel, Firebase Crashlytics, Sentry, Google Analytics.

WORK EXPERIENCE

Eyewa UAE | Technical Lead & Senior Frontend Engineer | Bengaluru, India (Remote)

June 2022 – Present

*Leading frontend architecture and internal tooling for a Middle Eastern eyewear e-commerce platform serving **2M+ monthly users**.*

- Engineered and launched a **mobile-first e-commerce platform**, contributing to a **10% increase in online sales**.
- Migrated a large legacy React codebase to Next.js and TypeScript, resulting in a **~40% improvement in Core Web Vitals** and SEO rankings.
- Introduced and championed adoption of a Turborepo monorepo** for internal tools, enabling shared UI logic, faster development, and consistent standards.
- Maintained and scaled a Backend-for-Frontend (BFF) using Node.js and GraphQL, simplifying client data access and reducing payload complexity.
- Maintained and scaled a proprietary component library (100+ packages) using Storybook, Lerna, and Verdaccio, enabling one-command publishing and consistent UI.
- Collaborated on a **custom CMS platform** used by marketing teams to dynamically update web pages via a **drag-and-drop interface**, backed by **MongoDB**, reducing dependency on engineering for content updates.
- Evaluated enterprise systems including Fareye (**shipments**) and Microsoft Dynamics 365 (**warehouse management**), designing user-friendly interfaces that delivered significant annual cost savings.
- Launched a custom POS system deployed across 200+ retail stores in the Gulf region, standardizing workflows and reducing staff training time by 25%.
- Built a warehouse assembly and QC platform that streamlined operations and enabled a 30% faster turnaround on thousands of eyeglass orders per month.
- Implemented Prerender.io to resolve SPA indexing challenges prior to the Next.js migration, significantly improving crawlability.

Led an 8-member engineering team for a B2B Agritech platform. Partnered with founders to build scalable tech that helped secure **\$13M Series A funding**. Mentored frontend engineers through architecture reviews, code quality standards and performance best practices, improving team delivery reliability.

- Architected a **fully asynchronous video processing pipeline** using AWS Lambda, SQS, and FFmpeg, generating multiple formats and HLS (m3u8) streams optimized for low-bandwidth rural environments.
- Built a real-time veterinary video consultation platform using Agora SDK, enabling farmers to receive instant medical assistance.
- Designed a smart matchmaking **microservice using Python (FastAPI)**, implementing geofencing, priority queues, and language-based matching (Punjabi, Hindi, Marathi, English).
- Automated generation of watermarked, music-enhanced marketplace videos, increasing listing quality and engagement.
- Designed and evolved MySQL schemas for marketplace and veterinary consultation systems, supporting listings, appointments, and transaction workflows.
- **Optimized the React Native app size to under 25 MB**, improving install success rates and reducing churn in data-sensitive regions.
- Implemented full internationalization (i18n) for 4 regional languages (English, Hindi, Punjabi, Marathi) to cater to a diverse user base.
- **Set up end-to-end CI/CD pipelines** using GitHub Actions, Fastlane, and Microsoft App Center, including automated testing and release distribution. Configured Nginx deployments for internal Web apps.
- Improved application reliability by integrating Mixpanel and Firebase Crashlytics, achieving >99% crash-free sessions through proactive monitoring.

Core developer for **Trainline UK** (500K+ users) and played a pivotal role in knowledge transfer from ThoughtWorks.

- Built and maintained features across React.js and React Native applications.
- Configured **parallel build pipelines** using **Rake, TeamCity, and Fastlane**, enabling release of **6 Train Operating Company apps** to Play Store and App Store within **~30 minutes**.
- Championed testing culture with **>80% test coverage using Jest and Appium**
- Led the knowledge transfer and release ownership when the project transitioned from ThoughtWorks to JK Technosoft, ensuring zero downtime.
- Recognized as Best Performer for two consecutive years.
- Delivered a company-wide talk on Single Page Applications and Service Workers, influencing adoption of modern web practices.

EDUCATION