

NILAY BHOTMANGE

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WORK EXPERIENCE

BI HUB Solutions — Software Developer

Feb 2024 – Present

- Architected and shipped **3 production SaaS applications** serving **50K+ monthly active users** using React 18, TypeScript, and Next.js 14, reducing initial page load times by **42%** through route-based code splitting and CDN optimization.
- Designed **real-time data visualization dashboards** consuming FastAPI endpoints with WebSocket, handling **10K+ concurrent connections** using React Query for optimistic updates and SWR for background data revalidation.
- Optimized Core Web Vitals across 15 pages: reduced **LCP from 4.2s → 1.8s** and **FID from 280ms → 45ms** through React.lazy(), image optimization (WebP, next/image), memoization strategies, and eliminating unnecessary re-renders (verified via React DevTools Profiler).
- Refactored **8,000+ LOC legacy class components** to modern functional components with custom hooks, reducing component re-renders by **35%** and cutting bundle size by **22%** (measured via Lighthouse and Webpack Analyzer).
- Reduced production errors by **67%** (from 1,200 → 400 monthly) by implementing Sentry boundaries, session replays, and automated alerts; established performance budgets with Lighthouse rejecting builds below 90 performance score.
- Built **CI/CD pipeline** with GitHub Actions automating unit tests (Jest), E2E tests (Playwright), visual regression testing (Chromatic), and progressive deployment to staging/production with automatic rollback on errors — **cut deployment time from 45min → 8min**.
- Established **Figma-to-React workflow** using design tokens (JSON config for colors/spacing/typography) and Figma API auto-sync, reducing design-dev discrepancies by **80%** and shipping pixel-perfect UIs **2x faster**.
- Built **company-wide design system** with **45+ documented components** in Storybook, adopted by **4 engineering teams** across 6 projects, cutting frontend development time by **30%** and ensuring consistent UX.

Spleen.ai — Frontend Developer

Jan 2023 – Jan 2024

- Built analytics SPA from 0→1 serving **15K+ users** with **sub-2s loads** via code splitting, CDN, and service workers.
- Implemented **real-time collaboration** (50+ concurrent) using WebSockets + GraphQL subscriptions + Apollo cache.
- Integrated Stripe, Twilio, SendGrid with retries + fallbacks achieving **99.7% API success**.
- Achieved **Lighthouse mobile 94/100** with mobile-first, gestures, and progressive enhancement.

FEATURED PROJECTS

HiddenHelp — Anonymous Crime Reporting Platform

hidden-help.vercel.app

- Built secure reporting system using Next.js 14, Clerk Auth, PostgreSQL, Prisma with **end-to-end encryption**.
- Scaled to **10K+ concurrent reports** with Redis rate limiting, DDoS protection, and WebSocket notifications.
- Implemented two-way anonymous communication with tokenized sessions + secure routing, maintaining legal audit trails.
- Implemented modular frontend architecture with code-splitting and lazy loading, improving scalability.

Snippet Studio — Real-Time Code Collaboration

snippet-studio.vercel.app

- Real-time code editor for 15+ languages with Next.js + Monaco + WebSockets + OT for conflict resolution.
- Added AI suggestions via OpenAI streaming, cutting cost **60%**, sub-500ms response.
- Deployed serverless functions on Vercel, enabling RTC for **hundreds of simultaneous users** with minimal latency.

TECHNICAL SKILLS & PUBLICATIONS

PATENTS & PAPERS

Frontend: React 18+, Next.js 14, TypeScript, SPA/SSR/SSG

Styling: Tailwind CSS, SCSS, Framer Motion, shadcn/ui

State/Data: Redux Toolkit, Zustand, React Query, SWR, GraphQL, REST, WebSockets

Performance/Testing: Code splitting, Core Web Vitals, Jest, Playwright, Lighthouse

DevOps/Tools: Git, GitHub Actions, Docker, Vercel, Storybook, Sentry

Backend: Node.js, FastAPI, PostgreSQL, Prisma, Stripe, Redis

EDUCATION

Yeshwantrao Chavan College of Engineering

Aug 2020 – May 2023

B.E. in Computer Science and Engineering

CGPA: 8.2/10

Relevant Coursework: Data Structures & Algorithms, Web Tech, DBMS, OS