

# Pankaj Singh

Software Developer | Frontend Specialist | Performance Optimization

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## PROFESSIONAL SUMMARY

Software Developer with 6+ years of experience architecting and developing scalable, performant, and accessible web applications. Proficient in React, Redux, TypeScript, and GraphQL with a strong grasp of frontend architecture, modern web performance, SEO, and code quality best practices. Skilled in Trunk-Based Development, CI/CD, A/B testing, and analytics integration (Looker, DRS). Adept in cross-platform apps (Web, Android TV, iOS).

## TECHNICAL SKILLS

### Frontend

ReactJS, Redux, TypeScript, JavaScript, GraphQL, HTML5, CSS3, Bootstrap, Canvas API, Web Components, RsPack, Webpack, React Native, Kotlin, Swift, Rust

### Backend

Node.js, Express.js, REST APIs

### Databases

Neo4j, Redis

### CI/CD & DevOps

Git, GitHub Actions, Jenkins, AWS, Docker, Kubernetes (K8s)

### Streaming & Observability

Conviva, Kafka, Dream11 DRS, Looker

### Testing

Jest, Mocha

### Practices

SOLID, TDD, Agile (SCRUM, Kanban), Trunk-based Development, A/B Testing

### Tools

Jira, Bitbucket, Datadog, VS Code, Webstorm

## EDUCATION

### B.Tech, Information Technology

Guru Gobind Singh Indraprastha University  
New Delhi

2014–2018

## EXPERIENCE

### SDE-2 Frontend

Jul 2021 – Present

FanCode, Mumbai

- Migrated Shopify-based e-commerce site to a new React.js frontend integrated with a Magento backend, improving performance and flexibility.
- Designed and implemented a scalable multi-tenant theming architecture for white-labeled storefronts (e.g., ICC, IPL teams) by integrating Figma API-driven color palettes into a styled-components configuration system.
- Developed a Canvas-based jersey personalization interface with dynamic positioning for names and numbers, boosting engagement and e-commerce revenue.
- Refactored legacy frontend (Elm architecture with Ramdajs) to a Redux Toolkit-based state management layer wrapped with React Suspense, enabling optimized rendering and reducing complexity.
- Implemented a custom SSR solution tailored for business requirements, improving SEO and increasing Lighthouse score from 34% to 85%.
- Built a new in-house CMS from scratch, supporting large media uploads via ETag headers and complex form workflows for streaming operations.
- Migrated legacy TV apps for webOS and Tizen to a new architecture, reducing frame drops by 90–95% via segment virtualization and spatial navigation.
- Architected and optimized GraphQL data modeling to unify streaming metadata (DRM, Ads, ABR configurations) across React Native, Android TV (Kotlin), and web apps.
- Created haptic feedback enhancements for iOS by implementing custom feedback handling in Swift.
- Enabled feature flagging, A/B testing, and analytics via Looker and Dream11 DRS.
- Set up GitHub Actions CI/CD pipelines with Kubernetes deployment for automated delivery.
- Mentored junior developers, advocated clean code practices, and contributed to architectural decision-making.
- Built real-time collaboration capabilities in the in-house CMS, enabling multi-user concurrent editing with conflict resolution and synchronized updates.
- Adopted agent-driven development for conversational UIs integrated with LLMs/AI agents, where 80% of boilerplate/grunt code is generated by AI, allowing engineers to focus on complex logic, decision-making, and high-impact feature development.

### Project Associate (Full Stack Developer)

Aug 2019 – Jul 2021

IIT Delhi, Assistech Lab, New Delhi

- Developed an indoor navigation system to aid mobility of visually impaired individuals in public institutions such as AI-IMS RPC and the National Association for the Blind.
- Designed and implemented the platform using React.js, kotlin (frontend), Express.js (backend), and Neo4j (graph database) to model building spatial data and enable pathfinding queries.
- Migrated building information tagging from a DOM-based layout to an HTML5 Canvas rendering system, enabling scalable annotation for large, complex floorplans with drag-and-drop utility icons.
- Built a mobile-first PWA with AR.js integration to allow users to identify rooms via camera-based AR tag detection; additionally implemented a native Android app for Bluetooth beacon-based indoor positioning.

- Integrated OpenStreetMap overlays and developed a custom algorithm to translate Canvas pixel coordinates into real-world GeoJSON coordinates for outdoor-to-indoor navigation continuity.
- Ensured accessibility compliance by adhering to WCAG guidelines, creating an interface usable by both sighted and visually impaired users.
- Implemented Internationalization (i18n) and Right-to-Left (RTL) support to localize the indoor navigation app for multiple languages, ensuring cultural and linguistic adaptability for diverse user groups.
- Developed multi-modal UI features enabling visually impaired users to interact with the application via voice commands, audio feedback, and video-assisted navigation.
- Created 3D building models and real-world environment renderings using Three.js for enhanced spatial awareness and interactive navigation experiences.

**Software Developer Intern** Jan 2019 – Jun 2019  
*Kuants, New Delhi*

- Migrated monolithic Django-based trading platform to a React + Django architecture, implementing client-side rendering from scratch.
- Developed and styled core UI/UX components, marketing pages, and reusable frontend modules to enhance product scalability.
- Built a custom typeahead input for the backtesting feature, enabling real-time algo-trading method suggestions and evolving it into an editor-like interface for improved user productivity.

**Co-Founder / Full Stack Developer** Aug 2018 – Dec 2018  
*Self-Initiated E-commerce Venture (CosBazaar), New Delhi*

- Conceived and executed a vision to establish MSME presence in each district of Delhi, enabling local sellers to market their products online.
- Validated the business model by sourcing handcrafted products from local retailers and successfully selling them via Amazon FBA and Flipkart Seller Hub with profitable margins.
- Designed and developed a WooCommerce-based web application with CMS integration, implementing order tracking, delivery workflows, and a React-based frontend for product listing and customer interaction.