

ABHISHEK SATYAM

Senior Software Engineer | Full-Stack (FrontEnd - Heavy) | React · Next.js · TypeScript · Node.js · Gen AI

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PROFESSIONAL SUMMARY

Senior Software Engineer with 7 years delivering production web applications end to end — React, Next.js and TypeScript on the frontend; Node.js, Express and PostgreSQL on the backend. Led a 6-engineer team building a SaaS platform for 50+ enterprise clients across 12+ major releases, owning system design, testing, CI/CD and cloud deployment. Recent focus: Generative AI - multi-tenant RAG / LLM systems on PostgreSQL + pgvector.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript (ES6+), SQL, HTML5, CSS3

Frontend: React.js, Next.js, React Native, Redux Toolkit, React Context, Valtio, Apollo Client, Tailwind CSS, Styled Components, Ant Design, HTML5 Canvas, Responsive Design, Web Accessibility (WCAG)

Backend & APIs: Node.js, Express.js, REST APIs, GraphQL, OpenAPI, Contract-Driven Integration, Server-Sent Events / NDJSON Streaming

Databases: PostgreSQL, pgvector, MongoDB, Mongoose, Schema Design, Indexing, Query Optimization

Gen AI / LLM: Generative AI (GenAI), Retrieval-Augmented Generation (RAG), OpenAI API, Embeddings, Vector Search (HNSW, IVFFlat), Chunking Strategies, Token Streaming, Citation Grounding

Architecture: System Design, Component Architecture, Micro-Frontends, Multi-Tenancy, SSR / SSG / ISR, Caching Strategies

Performance & Monitoring: Core Web Vitals (LCP, CLS, INP), Lighthouse, PageSpeed Insights, Critical CSS, Lazy Loading, Image Optimization (WebP, AVIF), Sentry

Testing: Jest, React Testing Library, Integration Testing, TDD

DevOps & Cloud: Docker, Nginx, GitLab CI/CD, CircleCI, GCP, AWS

Build & Tooling: Webpack, Vite, Babel, PNPM, NPM, Git, ESLint, SonarQube, Postman, Jira, SAST

Practices: Agile / Scrum, Feature Flags (LaunchDarkly, Split), A/B Testing, Code Review, Mentoring

WORK EXPERIENCE

Senior Software Engineer, QNu Labs

March 2025 – Present

- Own the full software development lifecycle for 3 web products built in React, Next.js, and TypeScript — from system design and implementation through testing, deployment, and production operations.
- Own and maintain Dockerized GitLab CI/CD pipelines and GCP deployments, standardizing build, test and release workflows across all 3 products.
- Architected reusable components and design systems adopted across all 3 products, accelerating feature delivery and enforcing UI consistency.
- Improved Core Web Vitals across key pages — reduced LCP from 3.8s to 1.9s, brought CLS below 0.1, and held Lighthouse performance at 90+.
- Established code-review and unit-test standards (75%+ coverage) and integrated automated regression testing into CI, reducing recurring production defects and improving release reliability.
- Mentor engineers through structured code reviews and pair programming, and partnered with backend, product, and QA teams to ship reliable releases monitored via Sentry.

Senior Software Engineer, AntWalk

July 2020 – March 2025

- Architected a library of 40+ reusable React, Next.js and TypeScript components, cutting feature-development time ~35% and ensuring design consistency across the product.
- Led a 6-engineer team building the core SaaS platform for 50+ enterprise clients, owning system design, implementation, testing, and deployment across 12+ major releases.
- Defined and integrated API contracts for 20+ endpoints with backend teams, reducing integration bugs ~25% through contract-driven development and shared OpenAPI documentation.
- Optimized performance via lazy loading, critical CSS extraction, and WebP / AVIF image optimization, reducing average page load time ~40% and improving Lighthouse score from 62 to 88.
- Increased unit-test coverage from 22% to 72% (Jest, React Testing Library) and ran 500+ code reviews, establishing engineering standards adopted across the team.
- Built feature-flag (LaunchDarkly, Split) and A/B-testing frameworks across 8+ experiments, enabling data-driven product decisions.

Software Engineer, AntWalk

December 2019 – June 2020

- Built 15+ responsive React UI components with a 4-member frontend team, delivering pixel-perfect, cross-browser compatible interfaces.
- Integrated 10+ REST APIs and GraphQL queries (Apollo Client) for dynamic data rendering across the platform.

Program Analyst, Cognizant

July 2019 – December 2019

- Built and maintained frontend modules for an enterprise web app used by 5K+ internal users, ensuring cross-browser compatibility and contributing to a ~15% reduction in UI-related defects.

PROJECTS

RAG Knowledge Assistant — TS · Node.js / Express 5 · Prisma · PostgreSQL (Neon) + pgvector · Next.js 16 · OpenAI · RAG / LLM
rag.abhisheksatyam.com

- Built a multi-tenant document Q&A system end to end — SHA-256 dedupe → recursive chunking → batched embeddings (100/request), through a retrieval path that streams citation-grounded answers and abstains when the corpus cannot support one.
- Designed the vector layer on PostgreSQL + pgvector: HNSW index (vector_cosine_ops, m=16, ef_construction=64) tuned per request via transaction-scoped SET LOCAL, chosen over IVFFlat because IVFFlat centroids degrade permanently on an incrementally grown table.
- Enforced tenant isolation in raw SQL where the ORM's type safety does not reach, with pgvector 0.8 iterative scan (strict_order) so userId post-filtering cannot silently return fewer than top-k results.
- Streamed tokens over NDJSON (fetch + ReadableStream) rather than SSE — EventSource cannot send a Bearer header — and propagated client disconnects to OpenAI via AbortController so abandoned requests stop billing.

EDUCATION

B.Tech, Computer Science & Engineering

2015 – 2019

Lovely Professional University, Phagwara, Punjab

Winner, Techfest Coding Competition, LPU (2019) · Finalist, Rajasthan Hackathon 4.0 & 5.0 (2018)