

ABHISHEK SATYAM

Senior Software Engineer | React · Next.js · TypeScript · Node.js | Gen AI/LLM · RAG

Bangalore, India | abhishek.satyam96@gmail.com | [+91 9915121582](tel:+919915121582) | linkedin.com/in/abhishek-satyam | abhisheksatyam.com

PROFESSIONAL SUMMARY

Senior Software Engineer with 7 years of experience building and scaling production web applications across frontend architecture, backend/API integration, databases, and cloud deployments. Strong expertise in React, Next.js, TypeScript, and Node.js, with a proven track record of building enterprise products from scratch, leading engineering teams, improving application performance and reliability, and delivering production systems end to end. Experienced in PostgreSQL, REST/GraphQL APIs, Docker, CI/CD, and GCP, with hands-on experience building GenAI applications using RAG, LangChain, OpenAI, pgvector, and vector search.

TECHNICAL SKILLS

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

Frontend: React.js, Next.js, Redux Toolkit, Apollo Client, Tailwind CSS, shadcn/ui, Ant Design, Styled Components, Web Accessibility (WCAG)

Gen AI / LLM: RAG, LangChain, OpenAI API, Embeddings, Vector Search, Prompt Engineering, Context Retrieval, Citation Grounding, Chunking Strategies, Token Streaming

Backend & APIs: Node.js, Express.js, REST APIs, GraphQL, OpenAPI, API Contract Design, Contract-Driven Integration, NDJSON, SSE

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

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

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

Testing & Quality: Jest, React Testing Library, Integration Testing, Automated Regression Testing, Code Review

Performance: Core Web Vitals (LCP, CLS, INP), Lighthouse, Code Splitting, Lazy Loading, Critical CSS, Image Optimization, Sentry

Security & Product Engineering: Authentication, Role-Based Access, Enterprise Security Workflows, Feature Flags, A/B Testing

WORK EXPERIENCE

Senior Software Engineer, QNu Labs

Mar 2025 – Present

Post-quantum cryptography and quantum-safe key management

- Built and launched **3 production web products from the ground up** — QVault, QKMS, and an engineering analytics platform — owning application architecture, repository setup, tooling, API integration, testing, and deployment within a 6-engineer product team.
- Designed and delivered QKMS, an enterprise key-management platform supporting **multi-role authentication**, key-profile management, and secure operational workflows for cryptographic key administration.
- Designed API integration architecture for enterprise workflows, defining data contracts, handling asynchronous operations and failure states, and integrating backend services across authentication, key management and reporting workflows.
- Built an engineering analytics platform on **Jira Cloud REST APIs**, designing JQL-based data retrieval, pagination handling, changelog aggregation, data transformation, and reporting pipelines to surface team activity and delivery-throughput metrics; adopted for leadership reporting.
- Owned **Dockerized GitLab CI/CD pipelines and GCP deployments**, standardizing build, test, release, and production deployment workflows across all 3 products.
- Established **unit-testing and code-review standards**, reaching 75%+ test coverage using Jest and React Testing Library and integrating automated regression testing into CI.
- Improved application performance and reliability through **Core Web Vitals optimization**, reducing LCP from 3.8s to 1.9s, maintaining CLS below 0.1, and sustaining 90+ Lighthouse performance.

Senior Software Engineer, AntWalk

Dec 2019 – Mar 2025

Promoted from Software Engineer, Jun 2020 · *Enterprise learning & capability-building SaaS*

- **Led and mentored a 6-engineer team**, building **2 web applications from scratch** including the core SaaS platform serving **50+ enterprise clients** — owning system design, implementation, testing and deployment across 12+ major releases.
- Architected a library of **40+ reusable React, Next.js and TypeScript components**, cutting feature-development time ~35% and ensuring design consistency across the product.
- Defined and integrated **API contracts for 20+ endpoints** (REST and GraphQL via Apollo Client) 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.

Program Analyst, Cognizant

Jul 2019 – Dec 2019

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

PROJECTS

RAG Knowledge Assistant — TypeScript · Node.js · Express · PostgreSQL + pgvector · OpenAI

rag.abhisheksatyam.com · github.com/AbhishekSatyam96/rag-assistant

- Built and deployed a **multi-tenant** document-question-answering platform with citation-grounded responses and abstention when relevant context is insufficient.
- Designed an end-to-end retrieval pipeline covering document chunking, embeddings, vector retrieval, context construction, and LLM response generation.
- Implemented tenant-scoped PostgreSQL + pgvector retrieval using **HNSW vector search**, batched embeddings, and SHA-256 document deduplication.
- Implemented streaming responses and request cancellation using **NDJSON, ReadableStream, and AbortController**, reducing unnecessary LLM processing and API costs.

EDUCATION

B.Tech, Computer Science & Engineering

2015 – 2019

Lovely Professional University, Phagwara, Punjab

Winner, Techfest Coding Competition, LPU (2019)