

KOUSHIK SAHA

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Senior Full-Stack Software Engineer

PROFESSIONAL SUMMARY

Over a million people use software I've built every month, most recently leading the Next.js, Node.js, and React/TypeScript platform behind a major energy company's customer experience and contributing \$2M+ in annual revenue. 6-years as a full-stack engineer, specializing in micro-frontend architecture and performance optimization, with recent work extending into AI-powered product development using Claude APIs. Maintainer of an open-source library trusted by 2+ companies.

SKILLS

Languages: JavaScript (7 yrs), TypeScript (6 yrs), Python (3 yrs), PHP (6 yrs), SQL

Frontend: React, Next.js, HTML5, CSS3, Responsive Design, WCAG 2.1

State Management: Redux Toolkit, Jotai, Zustand, React Query, TanStack Query, Context API

Build & Tooling: Webpack, Vite, Module Federation, Storybook, ESLint, Prettier, Lighthouse

Testing: Jest, React Testing Library, Playwright, Cypress, Performance Testing

UI Systems: Tailwind CSS, shadcn/ui, Radix UI, CSS Modules, Figma Handoff, SVG Animation, Ant Design

Backend & Data: Node.js, Express.js, GraphQL, REST APIs, OpenAPI, PostgreSQL, Redis, Django, Laravel

Databases: PostgreSQL, MongoDB, MySQL, Redis, Elasticsearch

Cloud & DevOps: AWS (S3, Lambda, CloudFront, EC2), Docker, GitHub Actions, CI/CD Pipeline Design

PROFESSIONAL EXPERIENCE

Lead Software Engineer | Freedom Shopping LLC

May 2025 – Present

- Constructed IJAISM, a software-as-a-service platform for academic publishing (Next.js, React, Prisma, PostgreSQL) – from peer review automation and ORCID login to payment gateways (Stripe/PayPal) and a complete CI/CD pipeline.
- Built multi-tenant platform for retail operations including rule-based anomaly detection, 2FA, automated payroll processing, and RBAC permissions management for multiple companies/stores.
- Possesses end to end ownership of the stack - API development, third party integrations, CI/CD pipelines and production deployment - both as an enterprise engineer and a solo founder. Designed a full-stack real-time ASL translation service which involved the use of React, Next.js, Node.js and Python/Flask, Media Pipe hand tracking and WebRTC video chat integration.
- Gesture recognition using computer vision and CI/CD pipeline including security scan (Trivy, CodeQL) via Docker and Kubernetes deployment.

Senior Full-Stack Software Engineer | Powerley

Jan 2023 – May 2025

- Modernized the DTE Energy public facing frontend by building a React 18 + TypeScript PWA that scored 95+ in Lighthouse at 1M+ MAU and generated \$2M+ ARR.
- Picked Module Federation over a shared monorepo, allowing three separate teams to ship independently; reduced cloud costs 30% for annual savings of \$180K.
- Built Go backend services for real-time energy monitoring data pipeline in addition to Node.js, leveraging Go's concurrency paradigm to deal with high-throughput, low-latency feed ingestion.
- Built a Storybook + TypeScript component library which saved 40% on UI development effort and made it possible to release 2 major versions a quarter; open-sourced library downloaded 500+ times a week by 12+ companies.
- Optimized frontend bundle size by 28% via Webpack/Vite profiling, code splitting, and lazy loading; ensured full component implementation of WCAG 2.1 guidelines.
- Built the GitHub Actions CI/CD pipeline from scratch, reducing release times from 45 to 8 minutes (82% improvement) while supporting daily deployments by 3 teams.
- Created an A/B testing solution with Jotai instead of Redux due to constantly changing states of experiments; increased sprint testing capacity by 40% at 1M+ scale.
- Mentored 8 engineers in 3 time zones; all got promoted in 18 months, while team velocity increased by 35% and retention was 95%.

Software Engineer | Codemen Solutions Inc.

May 2021 – Dec 2022

- Developed a JSON-based micro-frontend application that can fully define an entire website with a JSON payload and render it in React, which allows a single PM to deploy 1,000+ websites with no frontend engineer input at all.
- Built a React SVG modifier library in the browser (Storybook) for our physical security design teams, helping close \$500K+ worth of enterprise deals.
- Built REST/GraphQL APIs (compatible with Open API spec) for 8 client-side applications processing 50K+ daily requests at 99.8% availability with p95 <120ms; reduced dB calls by 35% via Redis caching.
- Created a Tailwind CSS & Radix UI component library which reduced cross-browser issues by 60%, avoiding one complete round of quality assurance testing per release.

- Scalable Module Federation setup for 8 dev teams (from 2) saving \$90K in annual costs.

Junior Software Engineer | MoveOn Cross-Border Trade

Jul 2019 – May 2021

- Built the new checkout flow on mobile with React and Optimistic UI, improving conversion rate by 35%, increasing Lighthouse score from around 65 to 90+, and decreasing cart abandonment rate by 22%.
- Scaled Laravel-based REST API by 3X, reducing response time by 20% and increasing throughput by 30% without any downtime.
- Mobile checkout process re-designed for the two biggest B2C e-commerce sites in Bangladesh — increase in conversions by 35% and drop-in cart abandonment rate by 22%.
- Architecture of Laravel product search API optimized to decrease the response time by 20% — no down-time during Black Friday traffic surges.
- PWA deployed using the same codebase for web and mobile with more than 90% Lighthouse score — made it possible to deploy to three channels with one effort.

Junior Software Engineer | BD SOFT IT

Jun 2018 – Jul 2019

- Conceived and implemented a JavaScript library with reusable components, used in 4 internal projects and saving time by 30% in development.
- Made an interface between front-end and Laravel REST APIs for several client-side modules, managing both the request and response cycles.
- Created 3 web apps using production-level code that saved time during developer onboarding period.

SELECTED PROJECTS

- MindReframe: An AI-native PWA, constructed entirely from scratch: Claude API, React, TypeScript, Next.js, multi-turn prompt chains, LLM guardrails.
- @codemen/groundfloor-react-ui: React + TypeScript + Storybook open-source design system: Over 500 weekly downloads on npm, used by 12+ companies, compliant with WCAG 2.1.
- IJAISM: Built a full-stack academic journal publishing platform (Next.js, TypeScript, PostgreSQL/Prisma) managing 12 journals with a custom 4-reviewer auto-publish workflow. Implement PWA support, authentication, and article submission.
- FixUp LLC Report: Built a multi-tenant retail management platform (Next.js, TypeScript, PostgreSQL/Prisma) covering daily/monthly sales reporting, inventory, payroll, tax exports, and reconciliation. Added time tracking, anomaly detection, 2FA security, and role-based permissions across 20+ operational modules.

EDUCATION

MS, Engineering Management — Westcliff University, Irvine, CA

GPA: 3.91 / 4.0 | August 2026

BSc, Computer Science & Engineering — North South University, Dhaka, Bangladesh

May 2019

CERTIFICATIONS

- AWS Certified Solutions Architect – Associate (2025)
- Professional Cloud Architect – Google Cloud (2024)

PUBLICATIONS & RESEARCH

- Artificial Intelligence Applications for Hospital Resource Allocation in Emergency Preparedness — Advances in Public Health, 2026. Published, Open Access. DOI: [10.1155/adph/7200757](https://doi.org/10.1155/adph/7200757)
- Big Data in Cancer Genomics: Computational Foundations and Emerging Pathways for Precision Oncology — Computational and Systems Oncology, 2026. Accepted, in production. DOI: [10.1002/cso2.70020](https://doi.org/10.1002/cso2.70020)
- AI-Powered Predictive Analytics in Cancer Prevention Policy: A Systematic Review — Health Science Reports, 2026. Under review.
- Integrating Artificial Intelligence with a Global Atlas of Human Genetic Variation: Implications for Precision Medicine — Journal of Multidisciplinary Healthcare, 2026. Co-author, under review.

LEADERSHIP & OPEN SOURCE

- React Design System Maintainer: The single maintainer of an open source React + TypeScript UI library with more than 500 weekly downloads through npm by 2+ organizations; responsible for managing GitHub issues, handling community PRs, semantic versioning, and changelog.
- Large-Scale Engineering Standards: Created React components and storybook-based engineering standards at Powerley for all 3+ products; reduced engineer onboarding time from 3 weeks to less than 1 week without any accessibility regression post implementation.
- Cross-Zone Time Engineering Mentoring: Mentored 8 engineers in US, South Asia, and Europe; 100% got promoted to mid-level within 18 months, 35% increase in team velocity, 95% retention rate.