

Mohammad Montasim Al Mamun Shuvo

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SUMMARY

Software Engineer with 3+ years building real-time, AI-driven web platforms across the full stack - React, Next.js, Node.js, and TypeScript. Promoted twice at a health-tech SaaS while architecting biometric and telemedicine systems. Improved application performance 40% and cut cloud infrastructure costs 70%. Focused on system design, state-machine architecture, and shipped HIPAA-compliant products.

SKILLS

Languages: TypeScript, JavaScript

Frontend: React.js, Next.js, Tanstack Start, Redux Toolkit, Tailwind CSS

Backend & Data: Node.js, Express.js, REST APIs, WebRTC, WebSocket / Socket.IO, PostgreSQL, MongoDB, Prisma

Cloud & DevOps: Microsoft Azure, AWS S3, Docker, GitHub Actions, CI/CD

Architecture: System Design, Microservices, Finite State Machines, Real-time Media (MediaPipe, HTML5 Canvas / Konva.js), SSO & OAuth

Testing & Tools: Jest, React Testing Library, Vitest, Lighthouse, Git, Figma

EXPERIENCE

MyMedicalHub International Ltd.

Mohakhali, Dhaka, Bangladesh

Health-Tech SaaS for AI-driven biometric assessment and telemedicine.

- **Senior Software Engineer** Oct 2025 – Present
 - Architected a finite-state-machine biometric engine on MediaPipe, replacing fragile React-hook state with deterministic transitions to sustain 60 FPS pose estimation and real-time rep counting at 99.9% reliability.
 - Led a Redux Toolkit rewrite of the medical-assessment chatbot, replacing brittle state with dynamic question routing to streamline the multi-step patient intake flow.
 - Built a Konva.js canvas engine for post-hoc correction of biometric range-of-motion data, using affine transforms and pixel-accurate frame comparison.
 - Refactored 54+ modules into a Presentational/Container architecture and eliminated memory leaks via imperative MediaRecorder capture controls.
- **Software Engineer** Oct 2023 – Sep 2025
 - Cut cloud infrastructure cost 70% by migrating Azure VMs to Azure App Service and automating CI/CD with GitHub Actions.
 - Boosted application performance 40% by replacing 5 legacy UI libraries with custom high-performance components and optimizing React render cycles.
 - Built a multi-tenant feature-flag system and API-driven dynamic theming serving 250+ client configurations.
 - Deployed a HIPAA-compliant SSO platform (multi-role access, OAuth, strict CSP) and an automated clinical reporting engine with branded HTML/PDF rendering for B2B medical data.
- **Junior Software Engineer** Sep 2022 – Sep 2023
 - Integrated real-time AI analysis and custom algorithms that reduced diagnosis time 25% at 95% accuracy.
 - Built a WebRTC video pipeline (OpenTok, then self-hosted STUN/TURN) with Socket.IO real-time feedback to stabilize remote consultations.
 - Hardened the SPA with a JWT-based REST API client layer protected against XSS and CSRF, and cut initial load times via lazy loading and route-based code splitting.

PERSONAL & OPEN-SOURCE PROJECTS

- **PostCraft** – AI-Powered Social Media Manager aipostcraft.vercel.app | [source](#)
 - Built an AI-native social-media manager that turns a single topic prompt into multiple scored, ranked post variants via Google Gemini, governed by brand guardrails (banned words, mandatory rules) and selectable audience/tone personas.
 - Offloaded heavy AI generation and scheduled posting to Inngest background job queues for a non-blocking UI, with graceful rate-limit and quota alerting.
 - Technology: **Next.js 16, TypeScript, Redux Toolkit, Google Gemini, Inngest, MongoDB, Better Auth, Tailwind CSS 4**
- **DevTools** – Developer Tools Suite devtoolsn.vercel.app | [source](#)
 - Built and shipped a privacy-first suite of 40+ browser-based developer tools (JSON/text diffing, Base64, regex, hashing, RSA keys, QR, cron, and more), most running fully client-side for privacy.
 - Engineered a full Next.js 16 (App Router) backend across 20 API routes: JWT/OTP email auth, account-synced saved state, a URL shortener with click tracking, and password-protected, expiring share links.
 - Technology: **Next.js 16, React 19, TypeScript, Tailwind CSS 4, PostgreSQL, Prisma 7, TanStack Query, CodeMirror 6, shadcn/ui**
- **BugReceipt** – Browser Bug Reporting Extension [Chrome Web Store](#) | [source](#)
 - Built a local-first Chrome extension combining tab recordings, reproduction steps, console logs, and network diagnostics into reviewable bug reports.
 - Implemented local sensitive-data filtering, screenshot annotation, and Markdown/ZIP, HAR, and JSON exports with user-controlled evidence removal.
 - Technology: **WXT, React 19, TypeScript, Chrome Manifest V3, Chrome Extensions API, Tailwind CSS, Vitest**

EDUCATION

- **Bangladesh Army University of Science and Technology** November 2016 – March 2021
B.Sc. in Computer Science & Engineering