Subham Saha

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PROFESSIONAL SUMMARY

Senior Software Engineer with **7+ years of experience** designing, building, and scaling high-traffic production systems across the full stack — from performant React frontends to distributed backend services with robust CI/CD, observability, and infrastructure-as-code. Led cross-functional engineering teams to ship **AI-powered products using LLMs and Generative AI**, driving measurable gains in latency reduction, system reliability, and developer productivity. Proven track record of owning system design end-to-end, mentoring engineers, and turning ambiguous technical challenges into scalable, well-architected solutions.

EXPERIENCE

Travelopia

Oct 2023 — Present

Senior Product Engineer — Tech Lead (promoted from Product Engineer)

Hybrid, Bangalore

- Led architecture and technical direction across **3 cross-functional teams**, owning system design decisions in TypeScript, Node.js (NestJS), and AWS; drove deep-dive debugging sessions and established observability patterns with CloudWatch that **reduced mean resolution time by 40%**.
- Designed and shipped an **AI-enabled Call QA platform** using Google Gemini 2.5 Pro and AWS Step Functions, processing **500+ calls/week** through a serverless pipeline (Lambda, SQS, audio transcription, PII redaction, AI-driven evaluation with structured outputs); collaborated with data scientists and stakeholders to deliver production-ready solutions.
- Established CI/CD pipelines via Git, GitHub Actions, and Docker across a **Turborepo monorepo (6 apps, 14+ shared packages)** with AWS CDK infrastructure-as-code, automated testing gates (Vitest, Jest), and **75%+ test coverage** enforcement; built internal diagnostic utilities and runbooks that **reduced deployment failures by 35%**.
- Performed performance analysis and root cause analysis (RCA) on critical production incidents in a React 18 multi-brand frontend (TypeScript, tRPC, Redis, Chakra UI); **resolved page load degradation from 12s to under 400ms** through Redis caching, SQS-driven async operations, and component lazy-loading.
- Own and manage **engineering teams** across MyTCS, Payments, Call Compass, the TA Portal, and the shared AI skills and DX projects; partner with stakeholders to resolve issues, and with other tech leads to scale practices and share knowledge across teams.
- Built and shipped the **TA Portal** (Travel Advisor Partner Portal) as Tech Lead, re-platforming Salesforce Experience Cloud to Next.js, NestJS, Cognito and Salesforce; introduced ADRs, a CI-checked feature map, Vercel Flags releases, staged deploys with rollback, and a CloudFront + WAF edge in AWS CDK.
- Authored the TCS **FY26 AI-SDLC playbook** (AI-assisted ' AI-delivered) and built our own**AI-SDLC skills**: a Claude Code plugin (**30 skills, 4 agents**, hooks) that takes a Jira ticket from spec to verified PR, with test-first builds, an independent **/prove-it** browser verifier, retros and a gardening loop that turns repeated lessons into lint, test and CI guards; guardrails ensure no agent merges, deploys or touches secrets.
- Co-built the shared **Travelopia DX AI skills** (AI-SDLC orchestration, quality gates, TDD enforcement, OWASP review) with a fellow tech lead and adapted them across brands, feeding learnings back between teams.
- Mentored engineers on debugging complex systems, product architecture, and pull request quality using Cursor AI, Claude Code, and GitHub Copilot.

MediBuddy

Jul 2020 — Oct 2023

Software Development Engineer II (promoted from SDE I)

Bangalore

- Debugged and resolved complex technical issues across **12 production microservices** (Node.js, JavaScript, REST APIs) serving **70K+ daily requests**; conducted root cause analysis (RCA) using Datadog APM, Sentry, and AWS CloudWatch, **improving response times by 20%**.
- Built internal tools, automation, and diagnostic utilities using Node.js and PostgreSQL, including an **auto-dialer handling 2,400+ cases/day**; developed data synchronization pipelines across PostgreSQL and DynamoDB to improve supportability at scale.
- Led customer-facing development of the **"Gold" subscription feature** using React.js and REST APIs, analyzing patterns across the customer base to identify improvements; translated customer feedback into technical solutions **increasing user conversion by 25%**, managing 3 engineers.
- Mentored L1/L2 support engineers on debugging complex systems with Git, GitHub, and CI/CD workflows; contributed to knowledge bases and technical documentation; partnered with product teams to prioritize features, improving observability and debuggability.

BuildSupply

Jun 2019 — Jun 2020

Software Engineer (Full Stack)

Gurugram

- Designed and developed a full-stack construction inventory management platform (Angular.js, Angular Material, Node.js, PostgreSQL) enabling real-time procurement tracking across multiple project sites, processing **1,000+ bulk orders/month**.
- Built an internal operations dashboard with tabular analytics and REST APIs that **improved order inflow monitoring accuracy by 30%**; owned feature development end-to-end from database schema design to UI, collaborating with product on prioritization based on customer feedback.

EDUCATION

National Institute of Technology, Agartala (NIT Agartala)

Jul 2015 — May 2019

B.Tech Computer Science and Engineering

TECHNICAL SKILLS

Frontend: Next.js, React, TypeScript, JavaScript, Tailwind CSS, React Query, Framer Motion, Chakra UI, Storybook

Backend: Node.js, Express.js , NestJS, tRPC, Zod, Prisma ORM, PostgreSQL, Redis, DynamoDB, REST APIs, Microservices

Cloud & Infra: AWS (EC2, Lambda, Step Functions, S3, SQS, EventBridge, API Gateway, CloudFront, WAF, CloudWatch, Amplify, CDK), Docker, CI/CD, GitHub Actions, Husky, Lint-Staged

GenAI & LLMs: Google Gemini, AWS Bedrock, OpenRouter, Prompt Engineering, Cursor AI, Claude Code (Skills, Subagents, Worktrees)

Testing & Observability: Jest, Vitest, React Testing Library, Datadog APM, Sentry, New Relic

PROJECTS

Sinclairs Hotels (Freelance): Built the website, booking engine (ICICI payments) and staff operations portal end to end for an NSE & BSE listed hotel group; INR 35L+ revenue and 15% conversion in the first month.

KarmaDaan (Founder): Built a secure platform connecting verified job seekers with trusted businesses in Tripura.

AWARDS & PUBLICATIONS

- 1st Runners-Up at Feature Factory Hackathon (Pregnancy Tool — maternal health tracking) - View
- "Star of the Month" and "Quarterly Achievers Award" at MediBuddy for outstanding performance - View
- "BYOD Supported Multimodal Classroom Interaction" — Elsevier, 2020 - View
- "Designing a Mobile based Non-Verbal Classroom Interaction System" — SSRN (158 downloads, 1,284 views), 2019 - View