

Saibal Roy

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SUMMARY

With 12+ years in software development, including 8+ years as a hands-on engineer and 4+ years in engineering leadership, I help teams design and scale cloud-native systems that deliver measurable outcomes. My focus is on amplifying teams by fostering ownership, autonomy, and clarity while grounding execution in data and realistic expectations.

In my current role as the Engineering Manager (Cloud and Web Apps), I built and scaled the DevOps and SRE practice team in 2022, growing it to five high-performing engineers and establishing modern engineering standards across global products. I currently lead DevOps initiatives that drive automation, reliability, and operational excellence. I've consistently earned top manager ratings with low attrition, guided by a people-first, outcome-oriented approach.

My current work spans the U.S. LegalTech and Australian Telehealth domains, delivering secure, compliant, and scalable SaaS platforms. I believe in intent-based leadership that is practical, transparent, and rooted in empathy, with a focus on people over process. My leadership approach empowers teams through autonomy and clarity.

IMPACT HIGHLIGHTS AND KEY SKILLS

- **ZLS.app (LegalTech Platform – U.S.):** Led the platform from inception, architecting the AWS solution, migrating from a Java Spring Boot monolith to 5+ microservices on ECS, implementing multi-database tenancy with Redgate, and building a RAG microservice to enhance AI-powered legal document search.
- **Claims Service International (CSI – InsuranceTech Platform):** Directed the migration from a legacy PHP application to a Node.js REST API and Angular stack on AWS, moving a 30GB on-premise MySQL database to AWS RDS via DMS with zero data loss and introducing CI/CD pipelines for deployment efficiency.
- **Material Management BP-ERP (Manufacturing ERP System):** Independently gathered requirements, designed data models, and developed the complete ERP system in VB.NET and MySQL, introducing a costing module that optimized purchase order decisions and improved negotiation outcomes for purchase managers.

Since 2024, I've been an Industry Mentor with the IEEE India Council, guiding aspiring engineers in leadership and technical growth.

→ Mentorship: [Topmate](https://topmate.io/saibal_roy/1207299)

→ Resources: saibalroy.com

→ Writing: [Substack](https://saibal.substack.com)

Tech Stack:

AWS ECS · Docker · TypeScript · Node.js/NestJS · React/Next.js · REST · Cloudflare Stack · Draw.io · Figma

For personal MVPs and POC, I explore RedwoodSDK and the Cloudflare stack (Miniflare, Durable Objects, R2, Queues).

PROFESSIONAL EXPERIENCE

Techno Exponent (T-Web Exponent Services Pvt. | Kolkata, India Ltd)

Sep '20 - Present

Engineering Manager (Cloud and Web Apps)

technoexponent.com

- **Scaled engineering operations** from 14 to 150+ members, serving as a **founding tech leader** driving the organization's cloud and SaaS transformation.
- **Directed architecture strategy** for multi-tenant, microservices-based SaaS platforms using **AWS, Node.js, and NestJS**, ensuring scalability, resilience, and cost efficiency.
- **Partnered cross-functionally** with Product and Business teams to align technology roadmaps with business goals, accelerating delivery of high-impact solutions across domains including LegalTech, InsuranceTech, and ERP.
- **Championed engineering excellence** by implementing **CI/CD pipelines (AWS CodePipeline, GitHub Actions)**, automated testing frameworks (**Jest, Cypress**), and **code quality gates (SonarCloud)**, improving release quality by 40%.
- **Introduced cloud-native practices** including containerization with **Docker**, distributed caching with **Redis**, and asynchronous processing using **Amazon MQ (RabbitMQ)** to optimize performance and scalability.
- **Led system performance optimization** across API and database layers (**MongoDB, MySQL, PostgreSQL**), reducing latency and improving throughput across core services.
- **Mentored and coached engineers and team leads**, building a collaborative, ownership-driven engineering culture rooted in continuous learning and technical excellence.
- **Contributed hands-on** to system design reviews, debugging sessions, deployment workflows, and **secure architecture audits**, ensuring reliability and compliance across projects.

Techno Exponent (T-Web Exponent Services Pvt. | Kolkata, India Ltd)

May '15 - Aug '20

Senior Software Developer

technoexponent.com

- **Led the design and delivery** of scalable, multi-tenant systems on **AWS**, using **ECS (EC2 capacity provider)**, **RDS**, **ECR**, and **S3** with lifecycle policies to ensure optimized cost, performance, and compliance.
- **Directed migration initiatives** from legacy stacks to **cloud-native architectures**, modernizing applications and improving deployment reliability.
- **Developed and maintained modular backends** using **Laravel** and **NestJS**, powering SaaS products across **virtual tours, CRM, and digital notary platforms**.
- **Championed CI/CD adoption** with **GitHub Actions** and **Jenkins**, introducing automated testing, code quality checks, and continuous deployment practices.
- **Improved application performance** through caching (**Redis**), optimized queries, and async job queues—reducing page load and response times significantly.
- **Mentored junior engineers** on clean code, architecture patterns, and API design—helping shape a collaborative, learning-oriented team culture.
- **Partnered with product owners** to translate requirements into technical deliverables, balancing scope, reliability, and time-to-market.

RABT Technologies Private Limited | Kolkata, India

Apr '14 - Apr '15

Senior Software Developer

- **Led on-site development** of a custom **ERP system** for material and inventory management using **VB.NET** and **MySQL**, serving manufacturing and procurement operations.
- **Collaborated directly with business stakeholders** for requirement gathering, process mapping, and system design to align with operational workflows.
- **Implemented modules** for **procurement, BOM, costing, and financial reporting**, driving efficiency in purchase and production planning.
- **Integrated SAP Crystal Reports** to automate financial and inventory analytics for audits and compliance.
- **Introduced role-based access control** and multi-level material workflows to improve system governance and traceability.
- **Maintained production readiness** through code quality reviews, regular backups, and data integrity assurance.

RABT Technologies Private Limited | Kolkata, India

Nov '12 - Mar '14

Software Developer

- **Developed ERP modules** for **sales, HR, logistics, and production tracking** using **VB.NET** and **MySQL**, enabling unified visibility across departments.
- **Implemented biometric attendance and HRM systems**, improving workforce management accuracy.
- **Engineered steel BOM tracking and ISO-compliant reports** using Crystal Reports to meet industrial audit standards.
- **Collaborated on-site with plant teams** to design and deliver process-aligned ERP functionalities.
- **Ensured modular architecture and data consistency**, enabling smooth feature upgrades and scalability.

Product & Platform Contributions

Techno Exponent (T-Web Exponent Services Pvt. | Kolkata, India Ltd)

Start Date - End Date

ZLS.app (LegalTech Platform | U.S.)

A cloud-native legal tech platform revolutionizing case management for U.S. public defenders. ZLS.app is a comprehensive advocacy and productivity solution built to streamline complex workflows, ensure data compliance across jurisdictions, and empower legal professionals.

- **Architected and led** the end-to-end development of a cloud-native legal tech platform, transforming a monolithic Java Spring Boot + React application into a **multi-region microservices ecosystem** on AWS ECS.
- **Implemented multi-database tenancy using Redgate** and built a **RAG-based AI microservice** to enhance document search and legal data discovery, improving query efficiency by 40%.
- **Integrated OpenAI and Whisper AI** to automate document summarization and video transcription pipelines, increasing legal team productivity by 25%.
- **Drove DevOps transformation** with GitHub Actions, SonarCloud, and automated security scans, establishing a **CI/CD and observability-driven engineering culture** that reduced release cycle time by 50%.

Techno Exponent (T-Web Exponent Services Pvt. | Kolkata, India Ltd)

Start Date - End Date

Claims Service International (CSI | InsuranceTech Platform)

CSI is a pioneering platform in the moving claims domain, helping carriers and customers resolve moving damage claims with speed, transparency, and regulatory alignment. It supports hundreds of nationwide movers with digital claim submission, progress tracking, and resolution

- **Modernized a legacy PHP monolith** into a secure **Node.js REST API with Angular frontend**, fully containerized and deployed on AWS.

Migrated a 30GB on-premise MySQL database to AWS RDS using **AWS DMS** with zero downtime and verified data integrity post-migration.

Established CI/CD pipelines with GitHub Actions and implemented observability via AWS CloudWatch and Sentry, enabling proactive detection and resolution of 90% of production issues.

Led agile delivery through sprint planning, backlog grooming, and client demos, improving feature delivery predictability and stakeholder satisfaction.

RABT Technologies Private Limited | Kolkata, India

Start Date - End Date

Material Management BP-ERP (Manufacturing ERP System)

Developed and deployed a custom ERP system for material and inventory management using VB.NET and MySQL during an on-site engagement.

Designed data models and implemented modules for procurement, BOM, costing, and reporting, aligning closely with stakeholder requirements.

Enhanced procurement efficiency by 30% through a costing and purchase history analysis module that supported data-driven vendor negotiations.

Integrated SAP Crystal Reports to generate dynamic business and financial reports, strengthening audit readiness and compliance tracking.

EDUCATION

- Post Graduate Programme, Software Development (System Design, Full-Stack, DevOps & MLOps) | International Institute of Information Technology Bangalore, India
- Master of Business Administration | University of Burdwan, West Bengal, India
- Bachelor of Computer Application
- A Level - Advanced Diploma (Software Engineering, Computer Science & Application) | NATIONAL INSTITUTE OF ELECTRONICS & INFORMATION TECHNOLOGY (NIELIT)
- O level - Business Professional Programmer (Computer Science & Application) | NATIONAL INSTITUTE OF ELECTRONICS & INFORMATION TECHNOLOGY (NIELIT)
- 12th, All India Senior School Certificate Examination (Science Stream with Computer Science) | Gurukul Grammar School | May 2007
- 10th, High School Leaving Certificate | St. Stephen's School, Guwahati | May 2005

CERTIFICATIONS

- **Containerized Applications on AWS** | Amazon Web Services | Dec '2024
- **GitHub Foundations** | GitHub | Nov 2024 - Nov 2027
- **Certified ScrumMaster® (CSM®)** | Scrum Alliance | Oct 2022 - Oct 2026
- **AWS Fundamentals: Going Cloud-Native** | Coursera | Jan '19