

Rajdeep Sengupta

Lead Engineer · Cloud & Infrastructure

Kolkata, India · IST (UTC+5:30) · Open to remote

rajdipgupta019@gmail.com | rajdeep sengupta.com | linkedin.com/in/rajdeep-sengupta | github.com/Rajdip019

EXPERIENCE

Chainrisk Labs

Remote

Lead Engineer

Aug 2025 – Present

- Lead a team of 5 engineers across the risk engine, simulation pipeline and cloud platform — architecture decisions, review and delivery.
- Built Proof of Reserves over **~\$1.5B in assets** — attestations computed inside **AWS Nitro Enclaves** for hardware-isolated, verifiable execution, proven with zero-knowledge circuits in **Circom**; extended to real-world assets (RWA).
- Rewrote the Monte Carlo risk engine in **Rust with CUDA-accelerated kernels**, replacing interpreted per-scenario execution with batched GPU compute: **60x lower cloud spend, 40x faster** end to end.
- Parallelised Solidity test-case execution across cores in Rust — **16x faster** Monte Carlo runs by saturating available compute.
- Built autonomous AI agents (LangChain, LangGraph) turning a manual risk-analysis process into a reproducible pipeline.

Lead Cloud and Infrastructure Engineer

Jan 2024 – Aug 2025

- Designed and built Chainrisk's entire cloud architecture from the ground up on AWS (Nitro, EKS), then owned the infrastructure end to end.
- Architected the automated risk-analysis pipeline sustaining **6M+ large-scale simulations per day** across 5,000+ parallel nodes.
- Standardised every environment as code — Docker, Kubernetes, Terraform, Ansible — with CI/CD that cut deployment friction **40%**.

Software Engineer

Dec 2022 – Feb 2023

- Built the bounty and audit platform on GCP in TypeScript and Go.

Immplify (previously DocuComb)

Remote

Software Development Engineer · Part-time

Dec 2022 – Present

- Ship full-stack features across frontend and backend in TypeScript and Go, and manage the GCP infrastructure they run on.
- Built serverless functions on GCP for multi-factor authentication, PDF/image processing and document security.

Software Development Engineer Intern

Apr 2022 – Nov 2022

- Built core web platform features in React, TypeScript and Go; established the Jest E2E suite that cut production bugs **30%**.

DryFi

Kolkata, India

Software Development Engineer

Oct 2023 – Jan 2024

- Brought the company's software stack in-house on GCP and Firebase, taking monthly running cost from **₹30,000 to under ₹1,000** — a **30x reduction**.
- Owned backend and infrastructure in TypeScript and Go, replacing paid third-party services with self-hosted equivalents.

SKILLS

Languages	Rust, Go, TypeScript, JavaScript, Python
Cloud & Infra	AWS (Nitro Enclaves, EKS, EC2, S3, IAM), GCP, Terraform, Ansible, Kubernetes, Docker, Linux, GitHub Actions, Jenkins
Systems	CUDA, Circom & zero-knowledge proofs, Trusted Execution Environments, distributed simulation, PostgreSQL, ClickHouse, MongoDB, Redis
AI & Web	LangChain, LangGraph, RAG pipelines, vector databases · React, Next.js, Node.js, GraphQL

PROJECTS

Flexauth — Rust, Axum, Tokio, MongoDB. High-performance authentication system with native Kubernetes support, letting companies deploy secure auth microservices in minutes. github.com/Rajdip019/flexauth

Smart Naka — AWS, DynamoDB, Lambda, API Gateway. Vehicle-tracking system deployed for the Government of Assam; sub-**800ms** tracking latency via distributed real-time data sync.

Prega.io — Go, Firebase, Cloud Functions. Medical-document manager with expiring share links built on signed URLs and encrypted storage buckets.

EDUCATION

Heritage Institute of Technology

Kolkata, India

B.Tech, Computer Science and Engineering

2021 – 2025

HONOURS

Winner, Ethos '23 (IIT Guwahati) — Smart Naka, real-time vehicle tracking for the Assam Government.

Top 8 India Finalist, Microsoft Imagine Cup '22 — Booklee, a hyperlocal book exchange platform.

Speaker, Cosmos DB Conference '22 — serverless Cosmos DB with Next.js, to an international audience.