

Shivam Sahu

+91-8542955645 | shivamsahu258@outlook.com | linkedin.com/in/shsax | github.com/shivamsahu-tech | shivamsahu.me

Technical Skills

Languages: TypeScript, JavaScript, Python, Java, SQL

Backend & APIs: Node.js, Express.js, FastAPI, REST APIs, WebSockets, JWT, MVC Architecture

Cloud & DevOps: Docker, Linux, CI/CD, GitHub Actions, Vercel, AWS (EC2, S3, SQS), Google Cloud (GCS, Pub/Sub)

AI/ML & GenAI: LangChain, LangGraph, MCP, Hugging Face, ONNX Runtime, RAG, Vector Search

Databases & ORMs: PostgreSQL, MySQL, MongoDB, Redis, Neo4j, Pinecone, Prisma, SQLite

Frontend & Mobile: Next.js, React.js, React Native, Expo, Tailwind CSS, Shadcn UI, Zustand, GSAP

Experience

Inxtinct Pvt Ltd

Dec 2025 — Present

Full Stack Developer (6-month Intern + Full-Time)

London, UK (Remote)

- Achieved **3–5 second** processing times for detecting sensitive data prior to outbound email delivery by architecting an asynchronous scanning pipeline distributed across **BullMQ** and **Redis** worker pools.
- Intercepted sensitive data leaks and malicious payloads in real-time by engineering a threat-detection engine with **Google Cloud DLP** and **Pub/Sub**, utilizing computed risk scores to dynamically secure enterprise email streams.
- Ensured reliable email processing during transient network failures by engineering a fault-tolerant retry architecture with exponential backoff and a dead-letter queue, guaranteeing **3x retry coverage** before routing to manual review.
- Designed a multi-tenant client onboarding system leveraging on-demand **AWS SQS** queues to decouple background integrations, reliably orchestrating sequential bulk-registration workloads of **300+ users** into the security platform with zero data loss.

Projects

CodeRAG — AI-Powered Graph-Based Repository Assistant GitHub — Live Demo Dec 2025

Tech Stack: React, FastAPI, Tree-sitter, Neo4j, Groq API, GitHub API, Redis

- Engineered a custom parsing pipeline using **Tree-sitter** to generate Abstract Syntax Trees (AST), chunking **10k+ LOC** repositories while strictly preserving architectural code context.
- Implemented **DFS traversal algorithms** over ASTs to resolve function calls, class hierarchies, and inter-file dependencies, constructing a comprehensive semantic graph stored in **Neo4j**.
- Architected a dual-retrieval ReAct agent chaining vector similarity search with **graph neighbor traversal**, resolving complex multi-hop code queries with **sub-3s latency** via **Redis** caching.

VisionVault — Privacy-First On-Device Multimodal Search Engine GitHub

Feb 2026

Tech Stack: React Native, Expo, TypeScript, ONNX Runtime, CLIP, SQLite-vec, INT8 Quantization

- Built an air-gapped, on-device image search engine executing a **512-dimensional CLIP embedding pipeline** natively on mobile processors, eliminating reliance on cloud compute dependencies.
- Optimized the application memory footprint by applying **8-bit INT8 model quantization**, reducing model size by 4x while maintaining high search accuracy on hardware-constrained Android devices.
- Integrated **sqlite-vec** for hardware-accelerated vector search, applying **Cosine Similarity** directly in SQL, and built custom asset interceptors to eliminate redundant network calls.

ShareMap — Real-Time Multi-User Location Sharing Platform GitHub — Live Demo Sep 2024

Tech Stack: MERN Stack, Socket.io, WebSockets, JWT, MapTiler API, E2E Encryption, A Algorithm*

- Developed a real-time distributed state architecture using **WebSockets (Socket.io)**, supporting low-latency live geolocation syncing and concurrent room-based user sessions for collaborative tracking.
- Applied the **A* Pathfinding algorithm** over complex **OpenStreetMap graph data** structures to compute and visualize accurate shortest-route navigation paths in real-time user interfaces.
- Implemented robust **End-to-End Encryption (E2EE)** for active WebSocket payloads and chat functionality, ensuring strict data privacy and secure session handshakes across distributed clients.

Achievements & Competitive Programming

- Competitive Programming & DSA:** Solved **700+ LeetCode** problems (peak rating **1735**) and **100+ Codeforces** problems, mastering advanced data structures and graph algorithms.
- Contests:** Secured Global Rank **2434** in LeetCode Weekly Contest 490 (40,000+ participants) and Global Rank **779** in CodeChef Starters 221 (17,000+ participants).
- Open Source Contribution:** Successfully merged a PR into the **Apache Superset** repository, resolving a core UI dual-scrollbar bug to improve dashboard usability.
- Hackathon & Academics:** Secured **Top 10 among 400+ teams** at AKTU—GUVI Hackathon. Scored **2nd highest SGPA** across all branches in first-year B.Tech.

Education

Dr. Abdul Kalam Technical University

2022 — 2026

B.Tech — Information Technology — CGPA: 8.31

Lucknow, Uttar Pradesh