Shorya Baj

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SUMMARY

Backend and systems engineer focused on building fast, reliable services designed to scale. I work primarily in Rust (Axum, Tokio) and TypeScript/Node.js, with emphasis on API design, databases, asynchronous programming, concurrency, caching, and distributed systems. I am increasingly focused on generative AI and LLM engineering — RAG pipelines, embeddings, vector search, and LLM-powered multi-agent systems — and on the backend infrastructure, observability, and performance work that takes AI applications beyond demos and into production.

EXPERIENCE

Software Development Engineer Intern — garden.finance Nov 2025 – Sep 2026
Hyderabad, India · Onsite

- Architected a Rust multi-chain balance-fetching service across 8+ chains (Bitcoin, Litecoin, EVM, Solana, Starknet, Tron, XRPL, Spark), cutting API response time from 40s to 2s (95%) with parallel Tokio tasks and request batching.
- Designed a producer-consumer request-batching coordinator over Tokio mpsc channels and shared mutex-protected state, with 50 ms batch windows and size-based flushing — processing 10 EVM chains in parallel and cutting redundant calls from 100+ to 3–4 per cycle (~97%).
- Built a three-tier Bitcoin provider fallback (Mempool.space, BlockCypher, Blockchair) with exponential backoff, achieving 99.9% uptime for balance queries despite provider failures.
- Built an automated cross-chain swap testing system executing 73+ swaps across 9 blockchains, using gasless EIP-712 signatures and sequential UTXO management.
- Built a Node.js/TypeScript data pipeline integrating 5 external APIs and normalizing differing response formats into structured JSON for a multi-agent LLM system.

Backend Engineer Intern — Actuall Apr 2025 – Sep 2025
Remote

- Built a real-time chat system in TypeScript using Socket.IO, with JWT-authenticated sockets and multi-device delivery.
- Implemented OTP-based passwordless authentication using JWT access and refresh tokens, with rate limiting of 3 OTPs per 5 minutes.
- Added FCM push notifications with offline fallback and account deletion with cascade cleanup.
- Built a TypeORM leaderboard with precomputed cached scores and cron-based trending recomputation.

Co-Founder & Lead Developer — AdSpace Mar 2025 – Jul 2025
Jaipur, India · Onsite

- Co-founded an early-stage startup and led development within a team of 5, building 80%+ of the product end-to-end.
- Built a decentralized advertising marketplace on Ethereum featuring NFT-tokenized ad slots and IPFS metadata, using Next.js and TypeScript.

PROJECTS

LLM-Powered Observability Agent Aug 2026 – Ongoing
github.com/bajshorya/llm-observability-agent

- Built a TypeScript/Node.js GenAI observability agent that ingests logs, detects anomalies, correlates them with recent commits, and generates root-cause hypotheses with suggested fixes.
- Designed a two-tier detection system in which statistical detectors handle common cases and the LLM processes only ~5% of flagged windows, controlling cost and latency.
- Enforced structured LLM outputs using Zod schemas (classification, correlation, root-cause), with context budgeting over log windows and a human-in-the-loop approval gate before automated fixes.

Technologies: TypeScript, Node.js, Zod, PostgreSQL/SQLite, LLM APIs, GitHub API, Next.js.

Polling Application Mar 2026
polling-app-frontend-rho.vercel.app

- Built a non-blocking Rust backend using Axum and Tokio, with real-time updates through Server-Sent Events and PostgreSQL async pooling with compile-time-checked queries.
- Developed a Next.js/TypeScript frontend using the React Context API and a live-updating UI.

Technologies: Rust, Axum, Tokio, SSE, PostgreSQL, Next.js, TypeScript, React.

EDUCATION

JECRC University, Jaipur, India 2026
B.Tech in Computer Science & Engineering (Blockchain Specialization) · CGPA: 8.2/10.0

Mahaveer Public School, Jaipur
CBSE Class XII: 79% · CBSE Class X: 88%

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Rust, Java, SQL, Python
Backend & Systems: Node.js, Express.js, Axum, Tokio, REST APIs, WebSockets, multithreading, concurrency
Databases: PostgreSQL, MongoDB, MySQL, Redis, SQLite
Generative AI: RAG pipelines, vector databases, embeddings, multi-agent architecture, LLM integration, prompt engineering
Frontend: React, Next.js, Tailwind CSS
Tools & Practices: Git, Docker, CI/CD, Agile, unit testing, integration testing
CS Fundamentals: Data structures and algorithms, OOP, system design basics