

Srijan Sarkar

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Summary

Computer Science undergraduate and **Software Engineer** with one year of production experience shipping features in **distributed, concurrent systems**, using **Go, Python, TypeScript**, and **SQL**. Built side projects involving **real-time WebSocket infrastructure**, concurrency-safe connection handling, and message broadcast at scale, alongside production work on **REST/WebSocket APIs**, background job dispatch, and relational data models. Comfortable learning new technologies fast and shipping under ambiguity, with a strong focus on **automated testing (Jest, Vitest & Playwright)** and code review in fast-moving remote engineering teams.

Education

Heritage Institute of Technology
B.Tech in Computer Science
Coursework: Data Structures & Algorithms, Operating Systems, Network Security

August 2023 – July 2027
GPA: 8.2/10

Experience

Hacken – Blockchain Security & Compliance
SDE - 1

Aug 2025 – Sep 2026
Remote

- Shipped core, user-facing features for **CORE3**, a global crypto regulatory platform, taking it from a blank editor to production use by institutional users evaluating on-chain and counterparty risk
- Integrated multiple backend **APIs** using **TanStack Query** for caching, synchronization, and background refetching, designing data flows around asynchronous server state to keep the system reliable as request volume grew
- Maintained **80% unit-test coverage** across CORE3 and the Hacken Rounds platform by writing and debugging tests with **Jest, Vitest**, and **Storybook**, catching regressions before they reached production
- Participated in code review, issue tracking, and sprint planning within a **10-person remote engineering team** across timezones using Git and GitHub, iterating quickly on feedback to ship reliable features

Skills

Languages: TypeScript, Go, Java, Python, JavaScript, SQL
Distributed Systems & Backend: Jenkins, Concurrency, Goroutines, WebSockets, REST APIs, Webhooks, Message Broadcast, JWT, OAuth, PostgreSQL, Express
Testing & Tooling: Git, GitHub, Docker, Jest, Vitest, Playwright, Postman
Applied AI: LLM APIs, RAG, Gemini, GroqCloud, Vector Embeddings, Pydantic
Frontend: React 19, Next.js, Redux, TanStack Query, GraphQL, HTML, CSS
Core CS: Data Structures & Algorithms, Operating Systems, Object-Oriented Programming, Database Systems, Network Security

Projects

Veyra – AI Voice Workflow Orchestration Platform
GitHub: github.com/srijan399/veyra

August 2026

- Built an end-to-end **AI agent platform** in **TypeScript/Next.js/React 19**, turning loosely defined business requirements into a working system with an interactive workflow graph, campaign configuration, and structured result views
- Designed a **Gemini-powered agent pipeline** converting plain-English operational requirements into typed conversation graphs, iterating on prompts, **Pydantic/Zod schemas**, and validation rules before compiling into executable **CALL-E** instructions
- Owned deployment end-to-end: authenticated **REST APIs** with FastAPI, a relational **PostgreSQL** model with **Drizzle ORM** and row-level security, and real-time integration of the third-party **CALL-E API** via idempotent webhooks and scheduled background dispatch
- Maintained **34 unit tests** covering AI schemas, API safety, CSV parsing, and call lifecycle, while documenting architecture and tradeoff decisions for independent extension within a fast-moving two-person team

Se3k – Slack Workspace Knowledge Graph
GitHub: github.com/srijan399/se3k | [Slack Agent Builder Challenge](#)

July 2026

- Architected a **TypeScript** ingestion system converting Slack workflow data into a weighted knowledge graph, exposed through a **RESTful API** decoupled from the event-ingestion layer
- Designed a **time-decayed ranking algorithm** (exponential decay, 30-day half-life) to score contributor expertise, favoring decayed edge weights over raw activity counts
- Implemented **Slack OAuth** for workspace authorization and **idempotent event processing** keyed on event IDs, ensuring replayed events could not corrupt graph state
- Integrated **GroqCloud** for entity extraction and **Jina embeddings** for semantic retrieval, then built a React dashboard for querying graph relationships

SocketsGo – Real-Time, Concurrent Chat Backend
GitHub: github.com/srijan399/socketsgo

Personal Project – July 2026

- Designed a room-based **WebSocket connection hub** in Go (`map[string]map[*websocket.Conn]bool` guarded by `sync.Mutex`) to safely broadcast low-latency messages across concurrent goroutines without race conditions
- Implemented self-healing broadcast logic that detects failed socket writes and immediately evicts dead connections, keeping message delivery reliable as clients connected and disconnected unpredictably at scale
- Persisted chat history as append-only **JSON-line logs** and enforced a regex-based identifier allowlist, closing a potential path-traversal vector in a security-conscious design
- Used Go's standard-library `net/http` router with method-aware routes rather than a third-party framework, making pragmatic architecture tradeoffs to keep the service small, explicit, and resilient

Achievements

- ETHGlobal Finalist** at New Delhi among 600+ projects and 1900+ hackers for building Dike, receiving a **\$5000 prize and \$500 flight credit** for a future ETHGlobal Hackathon
- Won a **\$4000 bounty** at the **EduChain Hackathon (Semester 3)**, ranking **6th among 900+ projects** for building **ALTnode**
- Secured the **Base Pool bounty** at **Unfold 2024**, a bounty at the **East India Blockchain Summit (IIT KGP)**, and the **AI/ML Track at KGEC** for building **Ruins of Rome**