Shaswat Raj

Software Development Engineer · TypeScript, Go, C++ · Merged upstream in gemini-cli, MoFA, Preact and Editor.js
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EDUCATION

Birla Institute of Technology, Mesra— B.Tech, Computer Science & Engineering — Expected May 2028

SKILLS

Languages: TypeScript, JavaScript, C++, Go, Rust, Python, SQL
CS fundamentals: Data structures & algorithms (codolio.com/profile/sh20raj), operating systems, DBMS, computer networks, OOP
Backend: Node.js, Express, Hono, FastAPI, PostgreSQL, Redis, REST, WebSockets
Frontend: React, Next.js, Tailwind CSS, WebAssembly
Tools: Git, Docker, GitHub Actions, Jest, Linux

EXPERIENCE

Bitotsav — BIT Mesra annual festival— Tech Lead '26 · Web team '25 — 2025 – 2026

- Led and built the tech platform for ~5,000 participants: website, registration, team workflows, points system, admin panel and internal tools.
- Built signed-QR entry verification with a scanner that keeps working in no-network zones; Redis in front of PostgreSQL for hot paths.
- Ran live operations through the festival: on call for organisers and gate volunteers, fixing data and flow problems as they came up.
- 2025 (web team): built the festival site's frontend, improved its SEO, and created the first QR-based entry system used at the gates.

ACM BIT Mesra (student chapter) — Joint Secretary — 2026 – 2027

- Built the chapter's student developer platform with verified identities and rankings (acm-bitmesra.github.io #3, merged).

Open source — Contributor — 2022 – Present

- Merged: google-gemini/gemini-cli #20778, turn cancellation now reaches in-flight chat-compression requests (AbortSignal threaded through the execution layers).
- Merged: mofa-org/mofa #1577, #1587, #1594 (Rust): replaced a panicking unwrap() in cron parsing; #[non_exhaustive] public enums. Also preactjs/preact #5331 and codex-team/editor.js #3040.
- In review: Go fixes in kmesh-net/kmesh (CNI nil-pointer panic, duplicate DNS refresh loops) and jaegertracing/jaeger #10024 (reject out-of-range sampling config); 14 open upstream PRs in all, each from a reproduced, filed issue.

PROJECTS

SopKit — *Next.js, TypeScript, WebAssembly* — sopkit.github.io

- 605+ privacy-first browser tools that process files client-side, with no uploads and no server compute.
- 4.3M+ requests and 213K+ visits in 30 days, built and operated solo.

CampusLoop — *Next.js, PostgreSQL, Cloudflare Workers, WebSockets* — campusloop.space

- Student network gated by college email; sign-up accepts the domains of 1,350+ Indian colleges. Feeds, marketplace, polls and time capsules.

Debo — *Next.js, TypeScript, vector search, OpenAI* — debo.life

- Personal AI memory: ingests notes, links and audio, embeds them, and retrieves context through a chat interface. Built solo.

IndexFast and MCP Pure — *TypeScript, Hono, Cloudflare Workers, MCP* — indexfast.co

- MCP servers on the edge; IndexFast submits URLs to Google, Bing and IndexNow from inside an IDE.

Kishan AI — *Python, computer vision, Telegram Bot API*

- Assistant for farmers: crop-disease diagnosis from photos, weather and mandi prices. Top 500 nationally, AICTE Productization Fellowship 2025.

HONORS

- AICTE Productization Fellowship 2025 — shortlisted in the national Top 500 (Kishan AI).
- Adobe University Hackathon 2026 — reached Round 3 with OmniAudit-GEO, an AI-search visibility auditor (team of two; live demo).
- Apify hackathon — prize ($100) for a production web-scraping actor.
- Technical writing on Dev.to, 45K+ followers.