Koustav Singh

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EDUCATION

Techno Main Salt Lake	Kolkata, India
B.Tech in Information Technology, Expected Graduation: 2028	*2024 – 2028*
K.E. Carmel School, Amtala	Kolkata, India
Class XII — Computer Science, Score: 85.5%	*2022 – 2024*
K.E. Carmel School, Amtala	Kolkata, India
Class X — Score: 92%	*2020 – 2022*

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Solidity, SQL, HTML/CSS
Frontend: React.js, Next.js 14, Redux, Tailwind CSS, shadcn/ui, PWA, Responsive Design
Backend: Node.js, Express.js, RESTful APIs, GraphQL, Microservices Architecture, System Design
Databases & Cloud: MongoDB, PostgreSQL, Supabase, Firebase, MySQL, Redis
Web3 & Blockchain: Smart Contracts, Solidity, Web3.js, Ethers.js, DApps, MetaMask Integration
AI/ML: LLMs, Groq API, OpenAI, Gemini API, Generative AI, AI Workflows, Prompt Engineering
Tools & DevOps: Git, GitHub, Docker, CI/CD, Agile/Scrum, Clerk Auth, Payment Gateways (Stripe)

EXPERIENCE

Web Developer
Samarth TMSL — Nov 2024 – Present — *Kolkata, India*

- Engineered full-stack student platforms using the MERN stack, serving 500+ active users with real-time features.
- Developed secure authentication using Clerk and Firebase, achieving 99.9% uptime across core services.
- Built admin dashboards with analytics, reducing manual operational workload by 60%.
- Optimized performance and accessibility (WCAG 2.1 AA), increasing user adoption by 40%.

Full Stack Developer
Modelsuite.ai — Jun 2025 – Oct 2025 — *Rüsselsheim, Germany (Remote)*

- Built AI-driven SaaS features using React, Node.js, and MongoDB, reducing feature delivery time by 20%.
- Architected and optimized RESTful APIs and microservices, improving system responsiveness by 15%.
- Implemented scalable database schemas and caching strategies supporting 10,000+ concurrent users.
- Collaborated in Agile sprints with cross-functional teams, shipping production features weekly.

Generative AI Developer Intern
AI Wallah — Jun 2025 – Jul 2025 — *Kolkata, India*

- Designed and fine-tuned LLM models for domain-specific tasks, improving accuracy by 25%.
- Integrated AI workflows using Groq API and OpenAI, processing over 10K+ automated requests per day.
- Developed proof-of-concept AI prototypes adopted in 3 production applications.

Backend Developer Intern
SaaSForge — Feb 2025 – Mar 2025 — *Delhi, India*

- Designed RESTful APIs serving 50K+ daily requests with 99.5% service uptime using Node.js and Express.
- Optimized PostgreSQL queries and indexing, reducing query execution time by 40%.
- Implemented Redis-based caching, decreasing API response latency by 30%.

KEY PROJECTS

AI Nutrition Tracker (PWA): Built production-ready AI-powered calorie detection app using Next.js 14, TypeScript, Groq API, and shadcn/ui featuring image analysis, voice assistant, macro tracking dashboard, dark/light mode, and installable PWA—deployed with 1K+ active users

Web3 Booking Platform with Smart Contracts: Developed decentralized booking system using Solidity smart contracts, Web3.js, React, and Supabase with on-chain payments, escrow functionality, and IPFS integration for secure, trustless reservations

Event Management Platform: Architected scalable MERN application with real-time attendance tracking using Socket.io, QR-based check-in, Clerk authentication, Firebase integration, and admin analytics supporting 500+ concurrent users

AI-Powered Content Platform: Built content generation system integrating OpenAI and Gemini APIs with Next.js, featuring prompt engineering, token optimization, caching strategies, and user workflow automation serving 2K+ daily requests

LEADERSHIP & OPEN SOURCE

Mentor — Open Source Connect & GirlScript Summer of Code   Jul 2025 – Dec 2025
Remote

- Mentored 50+ developers across full-stack, AI/ML, and Web3 stacks, driving a 30% increase in successful project completions.
- Provided architectural and code-review guidance focused on scalability, clean API design, and secure development practices.
- Created technical walkthroughs and contributor documentation that reduced onboarding time for new developers.
- **Outcome:** Strengthened contributor pipelines, improved PR quality, and increased long-term contributor retention and engagement.

Organiser — Open Odyssey 2.0 (MLH Hacktoberfest)   Oct 2025
Kolkata, India

- Co-led a large-scale open-source program with 200+ developers, promoting collaboration on Web3, AI/ML, and cloud-native tracks.
- Designed contributor learning pathways and documentation that enabled beginners to ship production-ready PRs.
- **Outcome:** Increased project visibility, boosted participant PR acceptance rates, and accelerated onboarding for first-time open-source developers.

Organiser — EDUC-A-THON 2.0   Nov 2025
Kolkata, India

- Organised a national-level hackathon with 1400+ participants and 20 finalist teams, managing logistics, outreach, and operations.
- Designed official Hacker Guide, event flow, and communication framework enabling smooth onboarding and structured judging.
- Coordinated partnerships with mentors, judges, and communities across India, boosting reach and participant engagement.
- Oversaw finale-day coordination, facilitating prototype evaluations, mentor interactions, and the 9-hour innovation sprint.
- **Outcome:** Elevated event brand presence nationally, increased developer participation by over 3x, and established a scalable operational blueprint for future editions.