

Suharshit Singh

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SKILLS

- **Languages:** Java, C/C++, Python, TypeScript, JavaScript
- **Frameworks:** Next.js, React.js, Node.js, Express.js, Rest APIs, Turborepo, Expo
- **Frontend:** HTML5, CSS3, Responsive Design, Core Web Vitals, PageSpeed Optimization, CDN, Lazy Loading
- **Databases:** PostgreSQL, MongoDB, Supabase, Upstash Redis
- **Cloud & DevOps:** AWS, Docker, Vercel, Cloudflare R2, Github Actions, CI/CD, Linux
- **Tools:** Git/GitHub, Postman, Figma(Mockup-to-code), Shadcn/UI, ImageKit, ZOD
- **CS Fundamentals:** DSA, OOP, OS, DBMS, Computer Networking, Rest API Design, System Design, Microservices Architecture
- **Soft Skills:** Cross-Functional Collaboration, Proactive Problem-solving, Adaptability & Growth Mindset

PROJECTS

Vibely – Event Centric Photo Sharing Platform | [GitHub](#) | [Live](#) Dec' 25 – Feb' 26

- Architected full-stack monorepo (Turborepo + Next.js 14 App Router + TypeScript strict) enabling QR-based event photo collection and shareable invite links across web and Expo mobile — ~40% reduction in cross-platform overhead.
 - Engineered normalized PostgreSQL schema on Supabase with RLS policies, UUID-keyed relationships across 4 core entities, and Zod-validated REST API contracts ensuring type-safe data ingestion with zero runtime type errors.
 - Optimized media pipeline via Cloudflare R2 object storage + ImageKit CDN (WebP/AVIF adaptive delivery), cutting average asset load time ~60%; enforced Upstash Redis distributed rate limiting across 200+ concurrent sessions.
 - Automated photo-expiry using Vercel Cron jobs, decoupling cleanup logic from the request lifecycle and eliminating stale-data accumulation — entire platform built on free-tier cloud infrastructure.
- Tech: Next.js 14, TypeScript, Supabase (PostgreSQL), ImageKit, Upstash Redis, Expo, Turborepo, Zod, Vercel Cron

Peer Link Serverless LAN Mesh Platform | [GitHub](#) Sep' 25 – Dec' 25

- Developed P2P LAN communication tool using UDP broadcast for zero-config device discovery across subnets — no central server, no manual IP configuration required.
 - Designed concurrent messaging architecture with Java multi-threading + NIO non-blocking I/O, enabling simultaneous TCP file transfers and UDP messaging for 10 peers with zero thread contention.
 - Enforced session-scoped privacy via heap-only volatile storage (instant wipe on closure) with zero residual disk artifacts, and virtual-room socket-layer allowlists for private peer communication.
 - Implemented JSON-serialised message framing over raw TCP sockets with custom protocol headers — supporting binary file payloads up to network MTU limits alongside real-time text messaging.
- Tech: Java, TCP/UDP Sockets, Multi-threading, Java NIO, JSON, Concurrent Programming, UDP Broadcast

DSAViz – Data Structure and Algorithms (DSA) Visualization | [GitHub](#) | [Live](#) Jun' 25 – Jul' 25

- Constructed interactive DSA visualization platform with frame-by-frame step control and variable-speed animation engine covering 10+ algorithms — sorting, graph traversal, and tree operations.
 - Translated Figma mockups into pixel-perfect, accessible UI components using Shadcn/UI + Tailwind CSS with sub-100ms interaction feedback across all input events.
 - Deployed on Vercel with edge caching and Core Web Vitals monitoring, sustaining 200 concurrent users at <2s LCP with horizontal scaling headroom.
 - Engineered customizable input controls enabling users to inject arbitrary datasets and observe step-by-step algorithm execution, reducing DSA concept comprehension time for learners.
- Tech: Next.js, React.js, Shadcn/UI, Tailwind CSS, TypeScript, Vercel

TRAINING

PEP – Professional Enhancement Program | [Certificate](#) Jun' 25 – Jul' 25

- Gained deep proficiency in 2–3 algorithmic patterns daily across a 5hr/day, 6-week DSA bootcamp in C/C++ and Java — covering Topological Sort, Dijkstra's, Union-Find, Segment Trees, Sliding Window, Backtracking, and Many more.
- Scaled from unrated to LeetCode 1630 (top ~25% globally) and Codeforces 669 by applying learned patterns directly to contest problems, improving pattern recognition and execution speed under pressure.

CERTIFICATES

- Cloud Computing | NPTEL | [Link](#) Oct' 25
- Build Generative AI Apps and Solutions with No-Code Tools | Infosys Springboard | [Link](#) Aug' 25
- TCP/IP and Advanced Topics | Coursera | [Link](#) Nov' 24
- Introduction to Hardware and Operating Systems | IBM x Coursera | [Link](#) Aug' 24

ACHIEVEMENTS

- Solved 300+ problems across LeetCode, Codeforces, HackerRank, and GFG spanning arrays, graphs, DP, and system-design patterns. Dec' 25
- Earned 5-Star C/C++ Rating on HackerRank and Top LeetCode badges, validating low-level programming, memory management, and algorithmic optimization skills. Oct' 25

EDUCATION

- **Lovely Professional University** Phagwara, Punjab
Bachelor of Technology - Computer Science and Engineering; CGPA: 8.14 Aug' 23 - Present
- **Seth Hukam Chand S.D. Public School** Jalandhar, Punjab
Intermediate; Percentage: 71.4% Apr' 22 – Mar' 23
- **Seth Hukam Chand S.D. Public School** Jalandhar, Punjab
Matriculation; Percentage: 86% Apr' 20 – Mar' 21