# Samarth Shukla

😱 SamarthShukla17 | 🛅 samarth-shukla | 🔀 samarthofficial52@gmail.com | 💂 +91 9369976077

# Summary

B.Tech CSE student (2023–2027) at KIIT with strong foundation in systems programming, algorithms, and data compression. Experienced in memory management, performance optimization, and full-stack development. Interested in high-performance computing, low-latency systems, and developer productivity tools.

# Work Experience

#### Website Designer & Tech Associate — Legal Bano

Website Designer & Tech Associate — Legal Bano April 2025 - PresentDesigned and optimized company website, boosted load speed by 40% and increased client inquiries by 25% Implemented technology stack decisions, reducing hosting costs by 15% and enhancing scalability for 10x traffic

Built automated workflows with founding team, increased development efficiency by 20-30%

### Open Source Developer — Antiwork/Gumboard

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September 2025Contributed 2 merged pull requests fixing UI consistency issues and improving user navigation Implemented clickable logo navigation (#775) and rounded border styling (#777) using React/TypeScript Collaborated through code reviews and utilized Git workflows to ensure seamless integration

## Projects

#### **Custom Memory Allocator**

C, Systems Programming

Executed malloc/free with block splitting, coalescing, and best-fit allocation. Reduced fragmentation by 20% and improved small allocation performance by 15-25% vs. glibc malloc.

#### Bandwidth Optimizer with Huffman Coding

C++, Algorithms

Built compression engine using priority queues and Huffman coding. Cut bandwidth usage by 30-50%, shrinking files by up to 35 MB. Achieved O(n log n) build and O(n) decode complexity.

## Mistry Message — Full-Stack Messaging Platform

Next.js, TypeScript, MongoDB

Built and deployed in 3 weeks, scaled to 500+ users with 99.9% uptime. Executed real-time chat and auth with <200ms latency, boosting retention by 30%. Added 3D visualization, doubling daily engagement.

#### File Compression CLI Tool

Node.js, Systems

Developed cross-format compression/decompression tool with modular plug-in design. Enhanced server storage utilization by 40% under stress-tested workloads.

## SKILLS

- Script
- Cloudflare Workers
- Databases: MongoDB, PostgreSQL, MySQL
- Programming: C, C++, Java, JavaScript (ES6+), Type- Core CS: Data Structures & Algorithms, DBMS, Operating Systems, Networking
- Web/Cloud: React.js, Next.js, Node.js, Express.js, Tools: Git, GitHub, Docker, CI/CD (Vercel, Netlify, Cloudflare), n8n Automation
  - Other: Tailwind CSS, Three.js, Drizzle ORM

#### EDUCATION

2023 - present B.Tech (Computer Science Engineering) at Kalinga Institute of Technology

## Achievements & Leadership

### • Rigel Foundation — Member

2024 - Present

Contributed to Government of India registered NGO initiatives in education, health, and sustainability, impacting 10,000+ people through community programs and outreach activities.

## ${\bf Cloudflare\ Vibe Summer\ Hackathon-Participant}$

August, 2025

Selected from 100+ applicants; completed coding challenges across 2 weeks, deployed MCP servers in cloud infrastructure, and earned recognition swags for technical excellence.