

Saurabh Chauhan

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EDUCATION

National Institute of Technology Hamirpur

Bachelor of Technology in Computer Science and Engineering

August 2024 – June 2028

CGPA: 9.2/10.0

TECHNICAL SKILLS

Programming Languages: C++, C, Python, JavaScript, TypeScript

Frameworks & Libraries: ReactJS, Node.js, Express.js, Tailwind CSS

Databases: MongoDB, MySQL

Technologies & Tools: Git, GitHub, REST APIs, WebSocket, Postman, VS Code, Vercel

Core Competencies: Data Structures, Algorithms, Object-Oriented Programming, Operating Systems

TECHNICAL PROJECTS

PathBound — Conditional Currency Exchange System 🌐 | 📄 | *Stellar Blockchain, REST APIs*

- Architected a Stellar SDK-powered fintech dApp enabling rate-protected FX limit orders for cross-border remittances, executing conversions only when real-time orderbook liquidity thresholds are met
- Developed REST API endpoints for real-time orderbook queries and trustline management, integrating React 18 + TypeScript frontend with live FX market-rate charts and sub-second Freighter wallet signing

CodeSync — Real-Time Collaborative Code Editor 🌐 | 📄 | *React, TypeScript, CodeMirror, Yjs, WebSocket*

- Built a Yjs (CRDT)-powered collaborative editor supporting simultaneous multi-user editing with live cursors, presence avatars, and per-user undo/redo via conflict-free WebSocket sync
- Deployed on Next.js App Router with CodeMirror 6 + TypeScript, integrating Liveblocks for authenticated room infrastructure and real-time session management

VeriJS — Static Analyzer for JavaScript 🌐 | 📄 | *Vanilla JavaScript, Node.js, Babel*

- Developed a Babel-powered AST static analysis engine detecting unused variables, unreachable code, type inconsistencies, and control-flow violations across JavaScript codebases
- Implemented data flow and control-flow reasoning algorithms applying rule-based semantic analysis, grounded in program verification and compiler research principles

Zenith — Smart Resource Allocator 🌐 | *MySQL, Node.js, Next.js, Recharts*

- Engineered a priority-based greedy algorithm solving the NP-hard resource matching problem with deadline tiebreaking, achieving $O(n \times m)$ time complexity
- Designed MySQL-backed resource evaluation pipeline assessing skill compatibility, capacity, and effort across dynamic task queues using Next.js + Recharts for visualization

ResumeFlow — AI-powered CV generator 🌐 | 📄 | *LaTeX, React, React-PDF, Express.js, Gemini API*

- Integrated Gemini 2.0 Flash API to refine user content into ATS-optimized bullet points, served through a React 19 + Vite + Tailwind mobile-first UI with live preview
- Constructed a Node.js/Express server-side pipeline compiling LaTeX (pdflatex) in real-time, enabling PDF and LaTeX export with public deployment

EXPERIENCE/POSITION OF RESPONSIBILITY

Volunteer, TEDxNIT Hamirpur

Nov 2025 – Present

- Coordinated end-to-end communication with 7 speakers, managing outreach, selection, and onboarding per TEDx guidelines
- Managed logistics and scheduling for a pre-NIMBUS event with 500+ attendees, ensuring on-time execution across all event tracks

Executive, Google Developer Groups (GDG) Ludhiana – NITH Chapter

Jan 2025 – Present

- Led *Genesis* initiative onboarding 450+ students, organizing 4 technical workshops to drive developer community growth and peer learning
- Spearheaded *GDG Abyss*, a large-scale technical event with 300+ participants, coordinating workshops, competitive challenges, and cross-team logistics