Arshpreet Singh

EDUCATION

Chandigarh University

Mohali, Punjab

Bachelor of Engineering in Computer Science — CGPA: 8.68/10.0

Aug. 2023 - July 2027

Guru Nanak Public School

Khant-Manpur

Senior Secondary Education (Class 12) — 91.4%

Apr. 2022 - March 2023

EXPERIENCE

Research Intern

June 2025 – July 2025

IIT Guwahati

- Conducted technical research on cache memory optimization, improving system performance by analyzing data patterns.
- Collaborated with research team to identify performance bottlenecks and develop data-driven solutions
- Applied analytical problem-solving skills to optimize complex technical systems.

Technical Support

Jan 2025 – May 2025

MERN Stack Development Community

- Provided technical guidance to 5000+ students, analyzing common development challenges and creating step-by-step solutions for recurring issues.
- Resolved 320+ technical queries with 4.8/5 student satisfaction rating through systematic debugging and comprehensive code optimization guidance.

PROJECTS

Fellowship Application Portal (VLSID 2026) | Next.js, Node.js, PostgreSQL, TypeScript Aug 2024 - Present

- Developed a scalable fellowship application platform (10,000+ users) with registration, tracking features.
- Implemented **secure authentication** and role-based access for applicants, reviewers, and admins with automated review workflows.
- Onboarded 500+ registered users and processed 500+ fellowship applications.
- Live Demo: here

E-Commerce Platform | Next.js, Node.js, Express, PostgreSQL, Razorpay, TailwindCSS Mar 2025 - Apr 2025

- Engineered a scalable e-commerce platform handling 10,000+ product views and 1,000+ orders, with secure authentication, cart management, and Razorpay payment integration.
- Enhanced frontend performance using Next.js ISR and TailwindCSS, achieving a **95+ Lighthouse score** and reducing load times by **40**%.
- Live Demo: here | GitHub: here

Real-Time Drawing App | Next.js, Node.js, TypeScript, PostgreSQL, WebSockets

Jan 2025 – Feb 2025

- Built a real-time **collaborative** board (inspired by Excalidraw) enabling seamless **multi-user drawing** in shared workspaces.
- Implemented WebSocket synchronization and scaled the backend to support 10,000+ concurrent users with <100ms latency.
- GitHub: here

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Java, C/C++, SQL, HTML/CSS

Frameworks & Technologies: Node.js, Express.js, Next.js, React.js, WebSockets, Redux, REST APIs, Tailwind CSS,

 ${\bf Bootstrap}$

Databases: PostgreSQL, MySQL, MongoDB, Prisma

DevOps & Cloud: Docker, Kubernetes, CI/CD (GitHub Actions), AWS

Developer Tools: Git, GitHub, Postman, VS Code

ACHIEVEMENTS

- Attained a 1827 rating on LeetCode with 800+ problems solved (Top 7.57% globally).
- Rated **Pupil** on Codeforces with rating of **1247** through regular participation in rated contests.