

BALKARAN SINGH

Personal Portfolio

Ropar, Punjab

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Education

Dr. B.R. Ambedkar National Institute of Technology, Jalandhar <i>Bachelor of Technology in Computer Science, CGPA: 8.52</i>	Aug 2023 – Present <i>Jalandhar, Punjab</i>
Shri Guru Ram Rai Sen Sec School, Ropar <i>Senior Secondary Education (12th: 94.4%, 10th: 92%)</i>	2019 – 2023 <i>Ropar, Punjab</i>

Experience

Campus Hostel Allotment Website (Backend Developer) <i>Improved backend features and solved critical logic issues for the campus hostel allotment system</i>	Sep 2025 – Present <i>Jalandhar, Punjab</i>
<ul style="list-style-type: none">– Implemented a rule-based validation system to restrict more than two students from the same state per room, ensuring fairness in first-year hostel allotment.– Enhanced room-status visualization with color-coded indicators for fully booked, partially booked, and empty rooms, and collaborated with the team to optimize allocation logic and overall backend efficiency.	

Projects

Fluento - Connect and Speak ReactJS, TailwindCSS, ExpressJS, NodeJS, DaisyUI, Stream.io	GitHub	May 2025
<ul style="list-style-type: none">– Developed a full-stack MERN language exchange platform with real-time chat, HD video calling, and a 7+ page architecture. Engineered a multi-state user journey with a 2-tier friend system (pending/accepted) and live updates.– Integrated Stream.io APIs for 1080p video quality and unlimited sessions. Secured the app with JWT authentication, used MVC structure in backend, implemented 4-tier responsive breakpoints, and designed a mobile-first interface with 32+ DaisyUI themes and 7 DiceBear avatars (200×200px).		
Shrinkster - URL Shortner ReactJS, MongoDB, NodeJS, Express, Tanstack, Redux Toolkit	GitHub	March 2025
<ul style="list-style-type: none">– Architected a scalable, high-performance URL shortener with custom slugs, guest/auth modes, and real-time analytics across 10+ REST APIs with error handling.– Executed secure authentication using JWT, bcrypt, and middleware for data validation, achieving sub-200ms response time and 99.9% uptime. Designed a responsive React frontend powered by Redux Toolkit and TanStack Query, featuring 15+ reusable components and smooth UI transitions.		
Dijkstagram - Live Dijkstra Visualizer C++, HTML/CSS, React, Node.js, Express.js, JavaScript	GitHub	Jan 2025
<ul style="list-style-type: none">– Constructed a Dijkstra visualizer with 25×55 grid, real-time path animation, drag-and-drop walls, and step-by-step highlighting to enhance algorithm learning.– Built a full-stack app with React frontend and Node.js backend, integrating a live C++ editor for real-time algorithm execution across a 3-page responsive layout. Enhanced the learning experience with interactive visualization, dark/light theme toggle, and adaptive layouts for screens above 480px.		

Technical Skills & Certifications

Languages: C, C++, Python, JavaScript, HTML/CSS

Frameworks & Libraries: React.js, Node.js, Express.js, Tailwind CSS, Redux Toolkit, DaisyUI, TanStack Query, REST APIs, bcrypt

Databases & Tools: MongoDB, MySQL, Git, GitHub, VS Code, JWT Authentication, Cloudinary, Postman, Render

Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Database Management Systems, Computer Networks

Certifications: Completed [The Web Developer Bootcamp 2025](#) by Colt Steele (Udemy) — Full-stack development(MERN)

Coding Profiles

LeetCode — Mastered 900+ problems on LeetCode (Knight badge), specializing in algorithms, data structures, and problem-solving.

Code 360 — Completed 100+ coding challenges and earned 30+ badges by mastering core DSA topics.

GeeksforGeeks — Solved 100+ practice problems, demonstrating proficiency in algorithms and securing an institute rank under 850.

Achievements

- Achieved a **1950+** rating on LeetCode, secured **625 rank** in Biweekly Contest 163 and **369 rank** in Biweekly Contest 165.
- Secured **5th rank** in Codestorm Campus Competition (2nd Year) among all 2nd-year students.
- Competed in the Vibe Coding Challenge: Inter-College Edition 2025, orchestrated by B. M. Institute of Engineering & Technology (BMIET), Sonepat, and secured a spot in the Finale.