

# BALKARAN SINGH

## Personal Portfolio

Ropar, Punjab

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[</>](#) LeetCode    [GeeksforGeeks](#)

## Education

**Dr. B.R. Ambedkar National Institute of Technology, Jalandhar**

*Bachelor of Technology in Computer Science, CGPA: 8.52*

**Aug 2023 – Present**

*Jalandhar, Punjab*

**Shri Guru Ram Rai Sen Sec School, Ropar**

*Senior Secondary Education, Percentage: 94.4%*

**2021 – 2023**

*Ropar, Punjab*

**Shri Guru Ram Rai Sen Sec School, Ropar**

*Higher School Education, Percentage: 92%*

**2019 – 2021**

*Ropar, Punjab*

## Projects

**Fluento - Connect and Speak** | ReactJS, TailwindCSS, ExpressJS, NodeJS, DaisyUI

**GitHub**    **May 2025**

- Built a full-stack MERN language exchange real time chat platform with 7+ pages (onboarding, home, chat, video call, notifications) and 4 user states (auth, onboarding, active, connected), a 3-tier friend system (pending/accepted/rejected) with real-time updates.
- Implemented real-time chat and HD video calls using Stream.io APIs, supporting unlimited sessions and 1080p quality. Secured with JWT auth and 5+ responsive breakpoints for seamless mobile-to-desktop experience.
- Developed a mobile-first UI with theme and avatar customization, using 32+ DaisyUI themes and 7-style DiceBear avatars (200×200px), a 3-level component structure (Layout, Sidebar, Navbar) with per-button loading states.

**Shrinkster - URL Shortner** | ReactJS, MongoDB, NodeJS, Express, Tanstack, Redux Toolkit

**GitHub**    **March 2025**

- Architected a modern, user-focused URL shortener with guest/auth modes, custom slugs, real-time click analytics, and 15+ REST APIs with error handling, achieving sub-200ms response times.
- Engineered a secure Node.js/Express backend with JWT auth, bcrypt hashing, and MongoDB Atlas, ensuring 99.9% uptime and 5+ middleware layers for robust data protection.
- Designed responsive React frontend with Redux Toolkit state management, TanStack Query for data fetching, and Tailwind CSS styling, delivering 40+ reusable components with smooth animations.

**Dijkstagram - Live Dijkstra Visualizer** | C++, HTML/CSS, React, Node.js, Express.js, JavaScript

**GitHub**    **Jan 2025**

- 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.
- Created 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.
- Refined a responsive UI with modern design patterns and accessibility standards with 50+ reusable CSS components, dark/light theme toggle, and support for 768px+ breakpoints.

## Technical Skills

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

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

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

## Relevant Coursework

- Data Structures & Algorithms
- Object Oriented Programming
- Database Management Systems
- Computer Networks

## Coding Profiles

**LeetCode** — [Balkaran on LeetCode](#)

*Knight badge holder with 850+ solved problems, 1850+ max rating, and secured **625 rank** in Biweekly Contest 163.*

**Coding Ninjas** — [Balkaran on Coding Ninjas](#)

*Solved 100+ problems and earned 30+ badges in core DSA topics.*

**GeeksforGeeks** — [Balkaran on GFG](#)

*Solved 100+ practice problems with an institute rank under 850.*