

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, Stream.io [GitHub](#) **May 2025**

- Built a full-stack MERN language exchange real time chat platform with 7+ pages (onboarding, home, Friends, signup, login, chat, video call, notifications) and "Multi-state user journey" from signup → onboarding → active platform usage, a 2-tier friend system (pending/accepted) 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 4-tier 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 10+ 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 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 15+ reusable components with smooth animations.

DijkstraGram - 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, dark/light theme toggle, and support for 480px+ 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, 1950+ max rating, secured **625 rank** in Biweekly Contest 163 and **369 rank** in Biweekly Contest 165.*

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.