

Ashirwad Singh

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EDUCATION

VIT Bhopal University

B.Tech in Computer Science (Cyber Security and Digital Forensics) **CGPA: 8.52**

Kothrikalan, MP

2022 – 2026

Reliance Foundation

Class XII (CBSE) **Percentage: 91.2%**

2021

Yak Public School

Class X (CBSE) **Percentage: 91.8%**

2019

TECHNICAL SKILLS

Languages: C++, TypeScript, JavaScript, SQL, HTML, CSS, Tailwind

Frameworks & Tools: React, Next.js, Node.js, Express, Socket.IO, LangChain, Docker, Git, Cypress, Stripe, VS Code

Databases & Auth: MongoDB, NeonDB, Redis, PostgreSQL, MySQL, Prisma, Drizzle ORM, NextAuth.js, JWT

Coursework: Data Structures and Algorithms, Object-Oriented Programming, Operating Systems, Database

Management Systems, Computer Networks, Theory of Computation and Compiler Design, Web Security, Amazon Web Services (AWS), Cyber Threat and Analysis, Software Vulnerability Testing, Software Engineering

PROJECTS

RepoSense [GitHub]

Summer 2025

- Engineered a RAG pipeline with **LangChain** and **Google Gemini AI**, exposing a real-time QA interface within a **Next.js 15** application.
- Automated meeting transcription and summarization via **Assembly AI** webhooks, delivering speaker-labeled insights in under 30seconds.
- Optimized document chunking and vector embedding workflows to reduce query latency by 50% and support 1,000+ concurrent sessions.

Dev-Rooms [GitHub]

Summer 2025

- Architected a tag-based room discovery service with **Next.js** and **Drizzle ORM** on **NeonDB**, enabling 15+ concurrent user sessions.
- Powered real-time peer-to-peer screen/code sharing via **GetStream React SDK**, sustaining 95% uptime and sub-100ms latency.

Chess Master [GitHub]

Winter 2025

- Engineered a real-time multiplayer chess engine with **Socket.IO**, **Node.js**, and **Express**, achieving 99% event delivery reliability.
- Validated moves via **chess.js** and enabled Spectator Mode with live state synchronization for 100+ concurrent games.
- Orchestrated move history tracking with back/forward navigation and persisted session state across refreshes for 95% game retention.

Multi-Threaded Proxy Server [GitHub]

Spring 2025

- Designed and implemented a **multi-threaded** HTTP proxy server in C, managing concurrent client connections using threads and semaphores to enforce connection limits.
- Applied operating system concepts like thread synchronization, mutual exclusion, and resource management using **pthread_mutex** and semaphore primitives.
- Built a custom **LRU cache** using dynamic memory allocation and linked list data structures, applying modular programming and **object-oriented** principles for code organization and maintainability.

ACCOMPLISHMENTS

CodeForces (Blagosloveniye): Max. **Rating** 1447 (Specialist); Global Ranks: 1617, 2310; Solved 500+ Problems

CodeChef (ethant5698): Max. **Rating** 1900 (Peak 1912), 4 Coder; Global Ranks: 77, 426, 452

LeetCode (Ethan038): **Rating** 2161 (Guardian); Global Ranks: 86, 509, 886; Solved 700+ Problems

CERTIFICATIONS & EXTRACURRICULAR ACTIVITIES

MongoDB Certified Associate Database Administrator

Issued by MongoDB [Credly]

MongoDB Certified Atlas Administrator

Issued by MongoDB [Credly]

Extracurricular Achievements: State-Level Boxing Medalist (Gold, Bronze); National-Level Representative