



Atharv Singh


Software Development Engineer — FullStack Developer — System Design Enthusiast

☎ [+91 7566931531](tel:+917566931531)  [Github](#)  [Atharv Codes](#)  [LinkedIn](#) ✉ singhatharv1919@gmail.com

Projects

EveSpark  | *React.js, Bootstrap, NodeJs, Express, MySQL, CORS*


- Engineered **secure user and admin authentication**, significantly **reducing event registration queue time** and crafted responsive profile pages to enhance user experience.
- Architected robust backend services with Node.js and Express**, efficiently managing event data and user profiles with MySQL for reliable storage and **quick retrieval**.
- Utilized CORS to enable secure cross-origin requests**, ensuring seamless interaction between frontend and backend components, thus maintaining secure and efficient communication.

ChatRoom  | *C++ (Boost.Asio, Multi-threading)*

- Built a scalable, high-performance chat room application using **Boost.Asio**, **async I/O**, and **multi-threading**, supporting **100+ concurrent clients** with **<50ms message latency**.
- Created a **custom messaging protocol** with **4-byte headers** and **512-byte payloads**, improving **message parsing speed by 40%** for efficient real-time communication.
- Optimized **session and queue management** using **event-driven architecture** and **shared pointers**, reducing **memory overhead by 25%** and enhancing scalability.

Fastlane  | *Go (Cobra, Concurrency, Socket Programming)*

- Constructed a modular, high-utility CLI for **network benchmarking** with commands like **ping**, **download**, **upload**, and **report**, tested across **20+ networks**.
- Implemented concurrent TCP speed tests and layered latency analysis (DNS, TCP, TLS), achieving **median ping accuracy ±6ms** and throughput up to **100 Mbps**.
- Delivered a branded, minimal **Unicode CLI UI** with spinners, live ASCII graphs, and JSON exports, improving **usability by 50%** in user testing.

AirWise  | *React, TailwindCSS, MongoDB, NodeJs, Express, Redis*

- Spearheaded a **full-stack AQI Trip Planner**, enabling users to find low-AQI destinations with **real-time** air quality data and travel recommendations.
- Implemented geospatial queries and real-time AQI integration** using WAQI API, MongoDB's **2dsphere index**, and distance calculation algorithms to provide accurate location-based suggestions.
- Leveraged **TanStack (React Query)** for efficient **server state management** and engineered scalable backend services following **MVM architecture** for seamless user experiences.

Skills

Languages/Tools: C/C++, Python, Golang, JavaScript, Git, AWS, Docker, MongoDB/MySQL

Frameworks: React, Node.js, Express, TanStack — **Coursework:** OOP, DBMS, OS, Networking, SDLC

Competitive Programming Codeforces Round 934 (Div. 2) achieved AIR of **2338** and AIR **1627** in LeetCode Biweekly Contest 150 .


Soft Skills: Leadership, Adaptability, Writing, Problem-Solving, Time Management

Certifications

Google — The Bits and Bytes of Computer Networking 

Covered TCP/IP, DNS, HTTP, network security, and troubleshooting.

Grade 98%

IIT KGP — NPTEL - Cloud Computing 

Studied cloud architecture, security, and distributed systems.

Elite Silver

Education

Vellore Institute of Technology, Bhopal

2022 - 2026

Bachelor of Technology - Computer Science

India

Current CGPA: **8.44**