

Saad Haider

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EDUCATION

Indian Institute of Technology, Jammu
B.Tech.

2024 – 2028
CGPA: 8.11

PROJECTS

- **Ember - Redis-inspired in-memory datastore.** Mar. 2026
Rust, TCP Sockets GitHub
 - Built a Redis-compatible in-memory datastore with RESP protocol support over raw TCP sockets.
 - Designed concurrent request handling architecture achieving ~180k requests/sec in local benchmarks.
 - Implemented RDB-style snapshot persistence and recovery for crash-safe restarts.
 - Added TTL expiration with lazy + active eviction strategies and atomic transaction support.
- **Anton - SQL-like database engine** Oct. 2025
Java GitHub
 - Built a SQL-like database engine from scratch with custom query parsing and execution.
 - Implemented B+ tree indexing supporting inserts, deletes, and range queries.
 - Explored database internals including indexing, query execution, and low-level storage design.
- **Vynk - UI Component Marketplace** Jun. 2025
Next.js, TypeScript, React, Tailwind CSS, Commander GitHub | Live
 - Built and launched a marketplace for premium UI components and templates with integrated developer tooling.
 - Developed an internal CLI tool to automate component installation and project setup workflows.
 - Achieved 200+ downloads within 36 hours and ~580 daily visitors through organic growth on X.
- **Autotone - Intelligent browser audio normalizer** Aug. 2025
JavaScript, Browser Extensions API GitHub
 - Built a browser extension that dynamically balances audio levels across browser tabs.
 - Designed automatic tab-aware volume adjustment for smoother listening across platforms like YouTube and Spotify.
 - Implemented automatic foreground/background tab prioritization for dynamic audio normalization.
 - Reached 300+ repository clones within the first week of release.

OPEN SOURCE CONTRIBUTIONS

- Contributed to **Checkstyle**, a widely used Java static analysis tool with 8k+ GitHub stars.
- Submitted fixes and rule validation improvements with merged contributions and ongoing PR reviews.

TECHNICAL SKILLS

- **Programming:** Rust, Java, TypeScript, JavaScript, SQL
- **Backend/Systems:** TCP Sockets, Redis, Docker, Linux, PostgreSQL
- **Web:** React, Next.js, Node.js, Express.js

ACHIEVEMENTS

- Secured 4th place in Hack-O-Calypse, a competitive programming hackathon at IIT Jammu. 2024
- Secured 2nd place in Developer of the Month, a web development hackathon at IIT Jammu. 2024

POSITIONS OF RESPONSIBILITY

- **Web Development Mentor**, Coding Club, IIT Jammu Present
 - **Competitive Programming Mentor**, Coding Club, IIT Jammu Present
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