

Ayush Agarwal

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Portfolio Site

EDUCATION

- The LNM Institute of Information Technology** Rajasthan, India
BTech in Computer Science and Engineering Dec 2021 – May 2025
- Delhi Public School** Ranchi, Jharkhand
Higher Secondary, Percentage: 93% April 2019 – May 2021

INTERNSHIP EXPERIENCE

- Alpha Tribe** Remote
SDE Intern Dec 2024 – Present
 - Designed and developed a scalable backend system for a web application using **Next.js**, improving performance and maintainability.
 - Migrated an existing backend from **Express.js** to **Next.js**, leveraging server-side rendering for enhanced SEO and scalability.
 - Utilized **TypeScript** to create type-safe APIs and reusable components, reducing bugs by 20%.
 - Collaborated with the frontend team to ensure seamless integration and optimized API calls for faster page loading times.
- Monarch Network Capital** Remote
Software Developer Intern Aug 2024 – Nov 2024
 - Developed a **backtesting system** for evaluating stock trading strategies using historical data, reducing manual efforts by 30%.
 - Implemented highly efficient multithreaded **C++ algorithms**, decreasing result processing latency by 50%.
 - Built a forward-testing module integrated with **webhooks** and real-time trading sockets, enabling live market analysis.
 - Designed an intuitive dashboard to visualize backtesting results, allowing stakeholders to make data-driven decisions.

PERSONAL PROJECTS

- E-Learning School** Live — GitHub
MERN Stack, JWT, Socket.IO
 - Developed a code-sharing platform with integrated **real-time chat** functionality using **Socket.IO**.
 - Implemented **JWT-based** authentication to secure user sessions and restrict unauthorized access.
 - Designed a user-friendly interface using **React.js** and **Tailwind CSS**, ensuring a seamless experience across devices.
 - Optimized backend architecture to handle concurrent users efficiently, improving overall system reliability.
- ConfessOut** Live — GitHub
Next.js, Redis, Twilio, Nodemailer
 - Built an anonymous storytelling platform with **privacy-first** principles, ensuring complete anonymity for users.
 - Integrated **OTP verification** using **Twilio** and **Redis** for enhanced account security.
 - Implemented server-side rendering with **Next.js**, reducing page load times by 40%.
 - Designed automated email notifications using **Nodemailer**, increasing user engagement by 25%.

TECHNICAL SKILLS

- Languages:** C, C++, Python, JavaScript, TypeScript, SQL
- Frameworks:** Next.js, Nest.js, Flask
- Frontend:** React.js, Tailwind, HTML/CSS
- Backend:** Node.js, Express.js
- Database:** MongoDB, Prisma, PostgreSQL
- Tools:** Git, GitHub, Docker, Postman
- Concepts:** OOP, DBMS, OS, DSA

ACHIEVEMENTS

- Qualified **PRMO** in 11th grade.
- Solved **700+** DSA problems on LeetCode, CSES, and GeeksforGeeks.
- Achieved **Top 10%** on LeetCode with a rating of 1732.

POSITIONS OF RESPONSIBILITY

- Desportivos (Sports Fest)** | Head of Sponsorship
- Counselling and Guidance Cell** | Student Mentor