Arsh Tiwari

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Education

Guru Gobind Singh Indraprastha University (GGSIPU) — Delhi, India
*Bachelor of Technology in Computer Science and Engineering; CGPA: **8.77/10*** — *2023 - 2027*

Work Experience

Gemini Solutions Pvt. Ltd. — June 2026 – Present
Software Development Engineer in Test (SDET) — *Gurugram, India*

- Working on **software testing and automation** assignments using **Python, Java, SQL**.
- Building and executing **automated test cases** and strengthening test coverage through hands-on engineering tasks.

MathonGo (Certificates) — July 2025 – Jan 2026
Software Developer Intern — *Bangalore, India*

- Revamped the Quizrr platform (1L+ users) using **React.js**, improving page load time by **35%** and boosting user engagement through consistent, scalable UI architecture.
- Built the **Notebooks feature end-to-end**, designing reusable components and integrating backend APIs for data persistence, increasing feature adoption by **25%** and improving session retention.
- Implemented **request deduplication** for API calls by caching in-flight requests, reducing duplicate network calls by **40%** and improving performance of data-heavy workflows.
- Integrated **RabbitMQ** to handle asynchronous tasks of note-saving and analytics, offloading heavy operations from synchronous APIs and reducing API response time by **25%** during peak usage.

Eterna Infotech Pvt. Ltd. (LOR & Certificates) — Nov 2024 – Mar 2025
Software Developer Intern — *Remote*

- Developed and scaled an E-learning platform (10K+ users) using **React.js**, improving initial load time by **40%** via code splitting and modular architecture.
- Optimized bundle size by enabling compression using **Webpack**, reducing JavaScript payload by **30%**.
- Reduced MongoDB query latency by 35% by adding compound indexes on frequently queried fields (userId, courseId) used in progress tracking and dashboard APIs.
- Implemented cache-aside pattern for frequently accessed course data using Redis, reducing repeated database hits by **30%** during high traffic.

Projects

APPLYSTACK | React, Node.js, Express.js, MongoDB, Redis, RabbitMQ, bcrypt, Docker | Live Demo | Code

- Streamlined job application workflows by building a full-stack platform with **React, Node.js, and MongoDB**, reducing candidate management overhead and increasing application speed by **25%**.
- Containerized **4 microservices** using **Docker & Docker Compose** to ensure **100% environment parity**, effectively eliminating deployment configuration errors and local-to-production environment drift.
- Reduced database load by **60%** using **Redis caching**, ensured **high availability**, and improved API response times by **10%** by offloading weekly report generation and email delivery to **RabbitMQ** based asynchronous workers.

GORTC | Go, Pion WebRTC, Fiber, WebSockets, FastHTTP, STUN/TURN | Live Demo | Code

- Built a **real-time video conferencing platform** in Go using **Pion WebRTC**, supporting P2P video rooms with up to **8 peers**, live streaming, and real-time chat.
- Engineered low-latency real-time communication using **WebSockets** for signaling and chat, with **STUN/TURN-based NAT traversal**, automatic reconnection, and peer connection recovery.
- Designed a lightweight, **stateless Go backend** using **Fiber and FastHTTP**, enabling scalable room management and real-time viewer tracking while keeping media streams entirely peer-to-peer.

Skills Summary

Programming Languages: C++, Python, Golang, SQL, JavaScript, TypeScript, HTML5, CSS

Frameworks and Databases: React.js, Next.js, Node.js, Express.js, MERN Stack, WebSockets, REST API, gRPC, RabbitMQ, Generative AI, Redis, MySQL, PostgreSQL, MongoDB

Coursework: Object-Oriented Programming, Database Management System, Operating System, Computer Networks

Tools & Platforms: Amazon Web Services (Foundational), Docker, Git & GitHub, Postman, Webpack

Achievements

- Grand Finalist at Smart India Hackathon 2025, ranked among the **top 5 teams** out of 68,000+ teams nationwide.
- Achieved **Knight** level on **LeetCode** (Contest Rating: **1885**), solving **600+** algorithmic problems.
- Achieved **Pupil** rank on **Codeforces** (Max Rating: **1272**).
- Earned a **2 Star** rating on **CodeChef** (Max Rating: **1480**).
- Published **10+ DSA videos** on **YouTube** (CoreLogic), explaining **contest** problems with optimized approaches.
- Winner of **MapmyIndia Hackathon** at IIT Delhi, among 720+ teams in a 24-hour national-level competition.