

Geetansh Agrawal

+(+91) 94793 94820 | geetansh810@gmail.com | geetansh810 | geetansh810 | LeetCode: geetansh810

Software Engineer with a deep interest in how systems behave at scale. I care about clarity in design, correctness in implementation, and consistency in execution. Motivated by learning, improving, and building technology that is robust, efficient, and meaningful. I approach engineering with ownership, curiosity, and the drive to create lasting impact.

Experience

Tata Consultancy Services (TCS) – TCS iON Digital Assessment Platform

Bengaluru, India

PRODUCT ENGINEER

Aug 2023 – Present

- Enabled the platform to reliably support 5M+ daily assessment transactions by decomposing the monolithic evaluation engine into domain-driven microservices, defining clear service boundaries and implementing idempotent REST interfaces predictable request handling.
- Improved system throughput by 35% and removed workflow bottlenecks by transitioning core evaluation flows to a distributed event-driven architecture, using Kafka/RabbitMQ with asynchronous message queues, consumer groups, and dead-letter handling.
- Reduced database query latency by 40% and improved data throughput for 1M+ candidate records by restructuring workloads across MySQL (transactional) and MongoDB (document storage), applying index tuning, read/write separation, and Redis-based hot-cache layers for high-frequency.
- Increased deployment reliability and minimized environment drift by adopting immutable Docker image builds, maintaining environment parity, and enabling zero-downtime rolling deployments on AWS EC2 via automated CI/CD pipelines.
- Reduced response time by 25% and strengthened operational security by refactoring core modules using scalable design patterns and implementing RSA/AES encrypted logging with key rotation.

Technical Skills

- Backend & Distributed Systems
- Databases & Caching
- Cloud & DevOps
- Frontend
- Core CS

Java, Spring Boot, Node.js, Microservices, Kafka, RabbitMQ
MySQL, MongoDB, Redis
AWS (EC2, S3, Lambda), Docker, CI/CD
React, Next.js, JavaScript
Data Structures, Algorithms, System Design, Design Patterns

Projects

ByteBox - Cloud File Storage App

gbytebox.vercel.app

NEXT.JS, NODE.JS, MONGODB, TELEGRAM API, AWS

- Served 100+ users with secure personal storage by using the **Telegram Bot API** for encrypted uploads and instant notifications.
- Achieved a **90% cost reduction** by replacing S3-style storage with **Telegram's persistent file backend** as a low-cost alternative.
- Enabled fast folder browsing by designing a **tree-based directory model** with lightweight recursive lookups.
- Built a system **different from traditional cloud file managers** through a novel Telegram-driven storage workflow.

Vibe - Real-Time Chat App

vibe-chat-app.com

REACTJS, NODE.JS, SOCKET.IO, WEBRTC, MONGODB

- Handled 50+ concurrent users by building a **Socket.io WebSocket layer** for low-latency message delivery.
- Delivered secure video calls by integrating **WebRTC** with TURN/STUN signalling for peer connectivity.
- Improved chat history load time by refining **MongoDB indexes** and caching frequent message batches.

Achievements

- Built a **real-time visitor analytics system** using an **event-driven streaming architecture**, securing **2nd Place at the GreenDeck Hackathon**.
- Lead App Developer at Google Developer Student Club (GDSC)** — Conducted **5+ hands-on bootcamps** and mentored **100+ students** in full-stack development and project implementation.

Education

University Institute of Technology RGPU

Bhopal, India

B.TECH — COMPUTER SCIENCE & ENGINEERING; CGPA: 8.23

May 2019 – Jun 2023