

Aman Gautam

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Education

Galgotias College of Engineering and Technology, Greater Noida

2023 – 2027

Bachelor of Technology in Computer Science and Engineering

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Database Management Systems, Computer Networks, System Design

Experience

Software Engineering Intern — DragonX Systems (AIC , IIT Delhi)

Jul 2026 – Present

- Owned end-to-end development, including CUDA kernels, OpenROAD integration, build infrastructure, benchmarking, profiling, and QoR validation.
- Achieved 15.7× faster GCD timing repair and 62 % faster Ibex GPU timing repair through CUDA acceleration and incremental STA.
- Solely engineered a CUDA-accelerated OpenROAD timing-repair flow, integrating GPU gate sizing, buffering, and OpenSTA.

Open Source Contributions

Open Source Contributor with merged PRs in Apache RocketMQ, cBioPortal, OpenRewrite, and Spring ecosystem projects. [Portfolio](#)

Apache RocketMQ

Dec 2025 – Present

- Opened PR #10555 implementing a zero-copy gRPC serialization optimization using UnsafeByteOperations, eliminating redundant byte-array copies in the message serialization path.
- Diagnosed CI failures as pre-existing flaky integration tests unrelated to the change, and validated the fix independently before re-triggering CI.

cBioPortal

Dec 2025 – Jan 2026

- Fixed incorrect HTTP 500 responses for missing genes in the REST API, aligning behavior with proper 404 semantics via controller-level validation.
- Merged Pull Request: cBioPortal PR #11910.

Technical Skills

Languages: Java, C++, SQL

Backend & Frameworks: Spring Boot, REST APIs, Microservices, WebSockets, Hibernate/JPA

Distributed Systems & Messaging: Apache Kafka (Message Queues), Redis (Caching), Multithreading & Concurrency

DevOps & Cloud: Docker, GitHub Actions (CI/CD), AWS (EC2), Render, Netlify

Databases: PostgreSQL, MySQL, Milvus (Vector DB)

Core CS & Practices: Data Structures & Algorithms, OOP, Git/GitHub, Load Testing (k6), Swagger/OpenAPI

Personal Projects

Real-Time Collaborative Sync Engine | [GitHub](#)

- Engineered a real-time, event-driven collaborative sync engine using Java 21, Spring Boot, Kafka, Redis, and WebSockets, supporting concurrent multi-user document synchronization with conflict resolution and Redis-backed caching.
- Horizontally scaled the system across 3 nodes and load-tested with k6 at 500 concurrent users, sustaining sub-120ms p99 latency under load.
- Documented all endpoints with Swagger/OpenAPI, improving API discoverability and onboarding for collaborators.
- *Technology Used:* Java 21, Spring Boot, Kafka, Redis, WebSockets, Docker, k6

ConvoMesh – Distributed Real-Time Chat System | [GitHub](#)

- Architected a distributed real-time chat platform using Spring Boot microservices, Kafka, Redis, PostgreSQL, and WebSockets following an event-driven architecture.
- Leveraged Kafka for reliable ordered message delivery and Redis-backed session caching, enabling high availability and seamless communication across 500+ concurrent connections.
- Designed asynchronous messaging workflows and horizontally scalable services, achieving sub-100ms message delivery latency under concurrent workloads.
- *Technology Used:* Spring Boot, Kafka, PostgreSQL, Redis, WebSockets, Microservices, Docker

TinyTrail – URL Shortener | [Live Demo](#) | [GitHub](#)

- Built a full-stack URL shortener with Spring Boot, React.js, PostgreSQL, and JWT-based authentication, handling 10,000+ redirects with average latency below 50ms.
- Implemented a real-time analytics dashboard tracking click volume and referrer data; deployed via Docker, Render, and Netlify.
- *Technology Used:* Spring Boot, PostgreSQL, REST APIs, Docker

Achievements

- LeetCode (Gautam-aman): Knight, Max Rating 2102 (Top 2%).
- Codeforces (AmanGautam.28): Specialist, Max Rating 1434.
- Solved 2000+ Data Structures & Algorithms problems across LeetCode, Codeforces, and other platforms.
- Winner, Techfest Hackathon 2026: Built Smart-Sagar, an AI-powered maritime solution, among competing student teams.
- Merit-Based Scholarship: Awarded full tuition fee waiver for top rank in B.Tech admission merit list, Galgotias College (2023).