

Mahir Dalal

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in [Linkedin](#) | [Codeforces](#) | [LeetCode](#) | [Portfolio](#) | [Github](#)

Summary

Computer Science undergraduate at IIIT Surat (B.Tech 2028) seeking a **Software Engineering Internship**. 2+ years of programming experience across OOP languages (C++, Java, Python, JavaScript), building scalable full-stack platforms, distributed systems, and agentic AI applications. Strong foundations in data structures, algorithms, and software engineering principles; quick to adopt new technologies and effective in collaborative, cross-functional team environments.

Education

Indian Institute of Information Technology, Surat

2024 – 2028

B.Tech in Computer Science and Engineering

CGPA: **8.05 / 10** | JEE Main Percentile: **98.2%**

Technical Skills

Languages: C++, Java, Python, JavaScript, TypeScript

Web Development: Next.js, React, Tailwind CSS, Node.js, Express.js, NestJS, REST APIs

Databases & Tools: MongoDB, PostgreSQL, SQL, Git, GitHub, Docker, Postman

Systems & Architecture: Socket.IO, WebSockets, Event-Driven Architecture, Microservices, Real-Time Systems, Distributed Systems, Observability & Monitoring, Concurrency, Multithreading, Synchronization, Performance Optimization

Software Engineering: Object-Oriented Programming, Design Patterns, SDLC, Agile/Scrum, Testing & Debugging

Computer Science Fundamentals: Data Structures & Algorithms, Database Management Systems, Operating Systems, Computer Networks, Cloud Computing

Projects

JAN-AI | *Next.js, Express, PostgreSQL, Prisma, Leaflet, Groq API, Gemini API, TypeScript*

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- Architected and shipped a full-stack civic-issue reporting platform end-to-end — Next.js/TypeScript frontend and Express/Prisma/PostgreSQL backend — with JWT authentication, geotagged reporting across **5 issue categories**, and a Cloudinary image pipeline, deployed on Vercel, Render, and Neon.
- Engineered a durable agentic backend using pg-boss job queues with resumable run/step-level tracing, a Zod-validated read-only tool-dispatch layer, and a routing agent that directs reports to specialized sub-agents based on intent.
- Built a semantic-deduplication agent combining Gemini embeddings (**768-dim**, pgvector HNSW) with Groq-hosted LLM reasoning and human-in-the-loop confirmation, including a rejection-memory constraint that suppresses previously-dismissed false positives.
- Developed an evaluation harness benchmarking agent decisions against curated ground-truth report pairs, enabling systematic regression testing of the AI pipeline prior to deployment.

AI DSA/CP Coach | *Next.js, Express, TypeScript, PostgreSQL, Prisma, Groq*

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- Architected a full-stack learning platform importing solve history from Codeforces and LeetCode APIs and computing per-topic mastery across **32 topics** via a confidence-weighted formula, ranking recommendations through a deterministic **4-stage pipeline** spanning **14 relational tables**, reducing manual problem-selection effort by an estimated **65%**.
- Enforced strict separation between deterministic decision logic and AI generation so problem selection stays fully reproducible and auditable, layering an LLM (Groq) strictly for hints and explanations behind a server-derived-input boundary that prevents prompt injection from user-controlled data.
- Built a time-gated hint system and an IDF-weighted Jaccard similarity engine ranking problems by topic overlap, both fully deterministic with zero model calls, cutting time spent locating relevant practice problems by an estimated **50%**.
- Designed a normalized **PostgreSQL schema** with Prisma migrations supporting incremental sync, idempotent re-imports, and multi-judge data reconciliation without duplicate or stale records.
- Validated core logic with **160 unit tests** covering the mastery formula, revision scheduling, similarity scoring, and cooldown/analytics edge cases, and deployed the system live on Vercel and Render.

Competitive Programming

- Codeforces:** Specialist (Max Rating: **1454**)
- LeetCode:** Knight (Max Rating: **1963**)
- CodeChef:** 3 Star (Max Rating: **1618**)
- AtCoder:** 7-kyu (Max Rating: **601**)

[CF Profile](#) ↗

[LC Profile](#) ↗

[CC Profile](#) ↗

[AC Profile](#) ↗

Achievements

- Ranked in the **Top 3%** globally on LeetCode (Peak Contest Rating: 1963, Knight).
- Achieved global rank **527** in LeetCode Weekly Contest 508.
- Achieved global rank **134** in CodeChef Starters 218.
- Qualified for **Round 2** of Amazon ML Summer School 2026.
- Ranked in the **Top 15,000** among 1 lakh+ participants in Google BigCode 2026.
- Solved **1000+** Data Structures & Algorithms problems across multiple online judges.
- Ranked in the **Top 2%** of 1.4M+ candidates in JEE Main (98.2 percentile).

Experience

Lead, Learn Code Solve (LCS)

Aug 2026 – Present

- Collaborated cross-functionally with programmers and team leads to design, review, and validate algorithmic problems for contests and practice sets, applying structured quality standards throughout.
- Mentored students in DSA and competitive programming, guiding problem-solving approach and contest strategy.