



Shikhar Gupta

Integrated Masters of Technology
in Information Technology

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EDUCATION

Degree	Institute	CGPA/Percentage	Year
Dual Degree in Information Technology	IIIT Gwalior	7.02	2020-2025
Class XII	ISC CMS Kanpur road Lucknow	95.6%	2019
Class X	ISC CMS Kanpur road Lucknow	93.6%	2017

WORK EXPERIENCE

- American Express** January 2025 – Present
Software Engineer — Automation and Tools Bengaluru, India
 - * Built a **VS Code extension** to autonomously generate **JUnit tests** for Java codebases using **LLMs**, **AST parsing**, and **build-validate-fix loops**, reducing test creation time by **20%**. Integrated **JaCoCo** coverage analysis and automated retry logic to iteratively fix broken tests.
 - * Built **Skills-PM**, a terminal-native **package manager** for an internal Claude skills ecosystem, enabling discovery and installation of **15,000+ repository skills** without local downloads — eliminating redundant cloning across 12+ the team.
 - * Designed and shipped an experimental **Payment Name Matching Engine** for the France market using a two-layer architecture — a **deterministic registry lookup** followed by an **embedding-based ML verification layer** — deployed in **shadow mode** against live traffic, reducing CT (chargeback) cases by **12%**.
- NASDAQ** June 2024 - July 2024
SWE - Intern remote
 - * Developed a **RAG-based conversational agent MVC backend** for large sensitive documents using **Spring Boot**, **Azure Open AI**, and **Prompt Advisors**, enhancing processing accuracy by **30%**.
 - * **Optimized** document indexing time by **designing and implementing a parallel processing framework** for **batch embedding creation**, leading to an **80% reduction in indexing time** and significantly improving **system efficiency**.
 - * **Designed** a prototype iOS app with an intuitive UI and **integrated** the backend using **Alamofire**, demonstrating potential for a seamless user experience.
- Futurepedia** October 2022 – June 2024
Software Engineering Intern — Fullstack Remote
 - * Scaled a **Next.js + Sanity CMS** platform to **200k users** on Vercel, cutting operational costs by **19%** and boosting conversions by **15%** via lazy-loading optimisations.
 - * Led integration of **Typesense Vector Search**, improving search precision by **60%**.

PROJECTS

- ScheduRx — AI Voice Receptionist Platform for Clinics** 2025 – Present
Personal Project schedurx.com
 - Built a production voice AI agent handling inbound and outbound patient calls via **Twilio SIP** trunk and **LiveKit**, with **Sarvam AI** for multilingual Indian STT/TTS (Hindi, Tamil, Telugu) and **GPT-4o** for response generation.
 - Containerised with **Docker Compose**, deployed with **Kubernetes**, and integrated a **GitHub Actions** CI/CD pipeline running unit, integration, and SIP tests on every push.
- PostMortemEng — AI Video Pipeline** June 2026
Personal Project Github
 - Automated YouTube Shorts generation using **Remotion**, **GSAP**, and **Ollama** with a **multi-agent pipeline** (Script Writer → Art Director → QA gate) — reducing end-to-end production from 6–10 hrs to **7 min**.
 - Integrated **Kokoro TTS** for narration and a schema-based quality gate that rejected 20 generations across 7 renders — achieving a **24× render speedup** via Remotion worker concurrency fix.

ACHIEVEMENTS

- Leetcode rating **1806** Best rank **171**
- Codeforces : **Expert** rating 1660(Highest)
- Best rank **170** in **Codeforces Div3 round.863** among 22k+ participants
- Best rank **1313** in **Codeforces Div2 round 794** among 18k+ participants
- Google hashcode secured **1898**.

TECHNICAL SKILLS

- **AI / LLM Systems**: OpenAI GPT-4o, Claude (Anthropic), Azure OpenAI, Sarvam AI, Retrieval-Augmented Generation (RAG), Langchain, LiveKit
- **Programming Languages**: Java, Python, TypeScript, JavaScript, C/C++, Kotlin
- **Frameworks & Libraries**: Next.js, Node.js, React.js, Spring Boot, Express.js
- **Databases**: PostgreSQL, MongoDB, Firebase, Pinecone, Firestore, Upstash Redis
- **Infra & DevOps**: Docker, Kubernetes, GitHub Actions, Vercel, DigitalOcean, Heroku
- **Others**: Twilio SIP, REST APIs, Git, Sanity, Typesense, Web Scraping, Stripe