MANTHAN SHARMA

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Objective

Motivated Computer Science Engineering student with strong foundations in full-stack web development and Generative AI. Experienced in building scalable, document-grounded AI systems with Retrieval-Augmented Generation (RAG) and modern web technologies. Seeking opportunities to contribute to impactful, user-centric software solutions while continuously advancing technical and problem-solving skills.

Education

Chandigarh University 2023–2027
Bachelor of Engineering in Computer Science and Engineering – **8.95 CGPA**
CBSE – Class XII (Intermediate) – **93.8%** 2022–2023
CBSE – Class X (Matriculation) – **97.4%** 2020–2021

Projects

- **INFOSTACK – Retrieval-Augmented Generation (RAG) Playground** Dec 2025
  Technologies: React, Tailwind CSS, Node.js, Express.js, Qdrant, Gemini API, LangChain, Puppeteer [🌐] [GitHub]
  - Built a full-stack **multi-document RAG** platform supporting text, PDF, image, and website ingestion, enabling **cross-document semantic retrieval with ∼90% relevance** in internal evaluation.
  - Designed **Strict (document-only)** and **Hybrid (document + LLM)** query modes with backend guardrails + citation enforcement, reducing unsupported/hallucinated answers by ∼**70%** in internal tests.
  - Delivered a production-grade chat interface with session persistence, response regeneration, copy feedback, and document-aware source tracking, keeping the **UI sub-second responsive**.
- **MEDIROUTE AI – Smart Ambulance Navigation & Traffic Signal Priority System** Jan 2026
  Technologies: React, TypeScript, Supabase (Postgres + Realtime + Auth), Leaflet, Tailwind CSS, Vercel [🌐] [GitHub]
  - Built a **real-time emergency mobility platform** with role-based dashboards (Admin / Hospital / Ambulance) and live GPS tracking updates every ∼2 seconds.
  - Designed **automated green-corridor routing** + live rerouting to reduce congestion impact, aiming for **25–40% faster** ambulance response times.
  - Implemented **capacity-aware hospital allocation** using a scoring model (distance + ICU/ER availability – incoming load).
- **Smart Home Environment Monitoring System** Jan – May 2025
  Technologies: Arduino, MQ Gas Sensors, Blynk, IoT, Gmail API
  - Developed an **IoT home monitoring system** for real-time environmental and gas tracking.
  - Integrated MQ gas sensors with the Blynk mobile app to deliver **live pollution monitoring and threshold-based alerts**.
  - Implemented automated **Gmail alerts and real-time mobile notifications** for hazardous condition detection and documented system performance in a research paper.

Technical Skills

- **Programming Languages:** C, C++, Java, JavaScript, TypeScript
- **Web Technologies:** HTML, CSS, Tailwind CSS, React, Node.js, Express.js, REST APIs
- **Databases:** MongoDB, MySQL, PostgreSQL, Qdrant (Vector DB)
- **AI & GenAI Tools:** Generative AI, RAG, Gemini API, LangChain, LangGraph
- **DevOps & Version Control:** Git, GitHub, Docker
- **Development Tools:** VS Code, Postman

Achievements & Certifications

- **Finalist** — *Hack The Winter: The Second Wave* **National-level Hackathon** (Jan 2026) [Drive]
- **Generative AI Leader** (Professional Certificate) — **Google Cloud × Coursera** (Jan 2026) [Drive]
- **Deloitte Data Analytics Job Simulation** (2026) [Drive]
- Ranked in the **top 2% nationally** in *Introduction to Internet of Things* by **NPTEL** (2025) [Drive]
- Completed **Generative AI Mastery Workshop — OpenAI Academy x NxtWave** [Drive]
- **Finalist**, **Project Expo 2025** for *Smart Home Environment Monitoring System*
- Cleared **NDA (National Defence Academy)** Examination
- **State-Level Swimmer** with **multiple medals** in inter-zone competitions