

Pushp Gupta

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Skills

Languages: C++, Python, JavaScript, SQL

Backend & Systems: REST APIs, event-driven systems, concurrency (WebSockets), debugging & performance optimization

Databases: MongoDB, relational databases (SQL)

Tools & Practices: Git, Linux, Flask, FastAPI, Express.js, GCP, OOP, DSA, Agile

Trainings

Data Structures and Algorithms SPRUCE powered by Hitbullseye – Online Mentor and Education Platform June 2024 – July 2024

- Focused on DSA, algorithmic problem-solving, and code optimization through time-constrained problems.

Projects

Inkr - React, Express.js, MongoDB, WebSockets, HTML5 Canvas May 2025 – June 2025

- Built a **real-time, event-driven system** supporting concurrent multi-user interactions with persistent shared state.
- Implemented **session management and synchronization logic** to ensure consistency across distributed clients.
- Identified and fixed performance bottlenecks in rendering and network flow, reducing latency and visual glitches by **60%**.

Sudoku Visualizer - HTML, CSS, JavaScript Jan 2025 – Feb 2025

- Implemented **backtracking and constraint propagation algorithms** with step-by-step execution visualization.
- Optimized algorithm behavior for edge cases to maintain consistent performance and responsiveness.

Multi-Modal Document Intelligence (RAG-Based QA System) - Python, OCR, Dec 2025 – Jan 2026
FAISS, LLMs

- Built a **multi-modal RAG pipeline** to answer questions grounded in real-world documents (text, tables, and images via OCR).
- Implemented **modality-aware ingestion and vector-based semantic retrieval** using FAISS for accurate context selection.
- Generated **context-grounded, uncertainty-aware answers** via an LLM and exposed functionality through a lightweight Streamlit UI.

Achievements

- SOPRA STERIA** Secured the Runner-Up position in the National Finale of the prestigious International Student Challenge
- ConverseE+** Led ConverseE+ Student Club as President

Education

Lovely Professional University (LPU) 2022- 2026

B.Tech in Computer Science and Engineering | CGPA - 7.77

Model School, Rohtak 2020- 2022

Senior Secondary School | Percentile - 75.2

Model School, Rohtak 2019- 2020

Secondary School | Percentile - 89.6