Pallavi Sinha

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EDUCATION

Maharaja Surajmal Institute of Technology　　　　　　　　　　　　　　　2021-2025
B.Tech in Electronics and Communications, Minor in Machine Learning and Data Analytics　　　　*CGPA: 8.64*

EXPERIENCE

Summer Intern　　　　　　　　　　　　　　　　　　　　　　　July 2024 - Aug 2024
National Informatics Centre　　　　　　　　　　　　　　　　　　　　　　　*New Delhi*

* Engineered a local development environment using **Docker & Docker Compose**, provisioning frontend, API, and MongoDB containers to streamline internal testing and reduce environment setup time from 15 minutes to **<2 minutes**.
* Redesigned the eShram CMS user interface using **React.js and TailwindCSS**, transforming a legacy PHP-based frontend into a responsive, mobile-first single-page application prototype.
* Implemented **Redis-based caching** (TTL: 10 min) for high-frequency endpoints, reducing API response latency by up to **70%** in load-test simulations.

PROJECTS

PsyFer　　　　　　　　　　　　　　　　　　　　　　　　　　　Live · GitHub
Python, Flask, FastAPI, Mistral 7B, REST API, React.js, TailwindCSS

* Led UI/UX design in Figma and collaborated on backend integration, ensuring accessibility, responsiveness, and secure image handling.
* Implemented responsive, accessible UI with React, Tailwind, and Framer Motion..
* Resolved performance bottlenecks and bugs across frontend and backend pipelines.

Semantra　　　　　　　　　　　　　　　　　　　　　　　　　　Live · GitHub
Python, FastAPI, LangChain, Mistral 7B, SPECTER2, Qdrant, HTML/CSS/JS, Render

* Engineered a production-grade FastAPI backend for real-time $< 30s$ biomedical fact-checking; achieved 95%+ citation accuracy using Qdrant vector DB and Mistral 7B.
* Developed scalable REST APIs and modular RAG pipeline with LangChain and SPECTER2.
* Set up GitHub Actions to prevent cold starts and maintain low-latency responses.

TECHNICAL SKILLS

DevOps & Deployment:	Docker, GitHub Actions, CI/CD, Playwright
Languages:	Python, C++, JavaScript
Backend & Cloud:	FastAPI, Node.js, REST APIs
AI/ML & Infra:	LangChain, Mistral 7B, SPECTER2, Qdrant
Developer Tools:	VS Code, GitHub, Figma
Databases & Storage:	MySQL, MongoDB
Frontend Development:	HTML, CSS, Tailwind CSS, React.js, AJAX

ACHIEVEMENTS

* **BNY Code Divas 2025 – Round 1 Qualifier**　　　　　　　　　　　　　　**Feb. 2025**
  Qualified in the top percentile among 92,000+ candidates in BNY Mellon's national women-in-tech hiring challenge.
* **Smart India Hackathon Winner**　　　　　　　　　　　　　　　　　　**Dec. 2023**
  Developed NyAI, a legal documentation assistant simplifying legal jargon for individuals and small businesses.
  Led UI/UX design lifecycle: from early mock prototypes to high-fidelity desktop Figma designs, aligning with domain-specific needs.
  Integrated Google OAuth2 (Node.js); explored Aadhaar-based eKYC for real-world govt auth.
* **Code4Cause Hackathon Runner Up**　　　　　　　　　　　　　　　　**Oct. 2023**
  Led a 6-member backend team; coordinated web development and integration under 36-hour constraint.