

# Sneha Gupta

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## EDUCATION

2023 – Present **Bachelor of Technology in Computer Science and Technology**  
at National Institute of Technology Delhi

Delhi, India

## WORK EXPERIENCE

**UI Engineer Intern (Frontend Developer) – Oeja SwasthSetu (Remote)**  June 2025 - Sept 2025

- Designed and developed a responsive doctor dashboard using React.js and Tailwind CSS for appointment management, patient record access, and profile management.
- Built reusable and scalable UI components and integrated RESTful APIs to handle real-time data, improving user engagement by 30%.
- Optimized frontend performance, rendering, and state management, reducing page load time by 25%.

## PROJECTS

**Smart Grid Energy Demand Forecasting** 

[Project Report](#)

- **Tech Stack:** Python, NumPy, Pandas, Scikit-learn, XGBoost, TensorFlow/Keras, Optuna, Matplotlib, Seaborn
- Developed a high-fidelity Short-Term Load Forecasting (STLF) system using XGBoost and LSTM to predict hourly household electricity demand from 4+ years of smart-meter data.
- Designed and optimized a stacked LSTM architecture (100→50 units, dropout=0.2) achieving **0.5522 RMSE** and 0.3788 MAE, outperforming XGBoost by over 9%.
- Applied Bayesian Optimization (Optuna) to tune XGBoost hyperparameters, improving generalization on seasonal and nonlinear patterns.
- Conducted extensive EDA including seasonality decomposition, long-term trends, and hourly/weekly cycles.

**EduBridge – Mentor-Mentee Platform** 

HTML, CSS, JavaScript, FastAPI, MySQL

- Developed a full-stack web platform enabling students to connect with mentors for project support and personalized guidance.
- Designed and deployed responsive, cross-browser UIs using HTML, CSS, and JavaScript, enhancing usability and accessibility.
- Engineered a secure backend with FastAPI to manage authentication, API requests, and user workflows.
- Structured relational data in MySQL to support profiles, session tracking, and feedback management.
- Implemented role-based access control, scheduling, and feedback modules to streamline mentorship operations.

**TinyVet – Multimodal AI Pet Assistant** 

Python, Ollama, LangChain, FAISS, Flask

- **Tech Stack:** Python, Ollama (Llama3, Moondream 1.8B), LangChain, FAISS, Flask
- Built a **privacy-first multimodal AI assistant** for pet health guidance using text and image inputs.
- Implemented a **Computer Vision + RAG pipeline** with FAISS, grounding responses in professional veterinary PDF manuals.
- Designed a **dual-intelligence system** combining visual symptom detection with evidence-based medical retrieval.
- Deployed a **local Flask-based system** ensuring on-device inference with zero data leakage and responsible AI usage.

## TECHNICAL SKILLS

### Languages

C, C++, Python, JavaScript, HTML, CSS

### Libraries & Frameworks

React, Express.js, Next.js, Tailwind CSS, FastAPI

### Databases & Developer Tools

SQL, Git/GitHub, VS Code, Google Colab, Jupyter Notebook

### Core Computer Science Concepts

Data Structures and Algorithms, Object-Oriented Programming, Operating Systems, Computer Networks, Database Management Systems, Machine Learning

### Soft Skills

Team Collaboration, Time Management, Adaptability, Communication, Quick Learning, Attention to Detail, Feedback-Driven Improvement

### Leadership

Volunteer, **TEMSMET 2025** – Managed LinkedIn publicity reaching 300+ students and designed 5+ creatives.

### Certificates

Academic, Technical, and Leadership Certificates 