

NANCY TYAGI

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Technical Skills

Languages: Python(Expert), Java, C, HTML/CSS, JavaScript, SQL

Frameworks & Tools: React.js, Next.js, Flask, Django, Node.js, Express.js, Tailwind CSS

Databases: MySQL, PostgreSQL, MongoDB, Redis, Mongoose, Prisma

AI/ML: LLMs, Generative AI, TensorFlow, CNN-LSTM, Keras

Core Competencies: Problem Solving, Communication, Critical Thinking, Team Collaboration

Experience

Defence Research and Development Organisation (DRDO)

July 2025 – September 2025

Software & Research Engineer Intern

Delhi

- Worked on an end-to-end computational model to simulate and analyze nuclear weapon effects in offline environment.
- Designed and deployed an interactive visualization interface to enhance simulation speed and interpretability for defense research.
- Conducted extensive research on defense data scenarios, contributing to a high-impact project in collaboration with senior scientists.
- Utilized tech stack including Python, Kivy, and defense-specific models (WSEG-10, DELFIC, GLASSTONE), along with ML algorithms.

Includeher Women Engineer Cohort 4.0

Feb 2024 – April 2024

Mentee — Mentorship Program supported by Microsoft Azure

- Acquired expertise in Generative AI and LLM pipelines, including tokenization, prompt engineering, and inference optimization of GPT models.
- Collaborated with a cross-functional team to design and deliver a capstone AI project under industry expert mentorship.

Projects

EEG Signal Classification | *Python, TensorFlow, Signal Processing, Statistical Analysis*

Present

- Developing an AI-powered hybrid CNN-LSTM model for real-time epileptic seizure detection using EEG data.
- Aims to deliver scalable, low-latency diagnosis support for critical medical monitoring systems.

Skill Exchange System | *React.js, Node.js, Flask, PostgreSQL, NLP*

Jan 2025

- Designed and deployed a dynamic barter platform enabling users to exchange skills seamlessly without monetary transactions.
- Implemented NLP-based matching for personalized skill recommendations.
- Integrated a real-time chat and booking system for smooth, direct exchanges, enhancing user engagement.

MargDarshak - Strategic Route Optimization System | *Python, Django, MySQL, ML libraries*

May 2024

- Built a scalable ML-based traffic prediction system to optimize urban congestion in real-time.
- Applied predictive analytics and integrated fault-tolerant mechanisms for reliable, continuous operation.
- Delivered a real-time route optimization engine capable of improving traffic efficiency for large-scale urban networks.

Education

Ajay Kumar Garg Engineering College, AKTU

2022 – 2026

Bachelor of Technology in Information Technology

CGPA: 7.56

Kendriya Vidyalaya KNN, Ghaziabad

XII, PCM (CBSE) – 90%

X (CBSE) – 92.8%

Relevant Coursework

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|------------------------|-----------------------|---------------------------|---------------------|
| • Data Structures | • Operating Systems | • Artificial Intelligence | • OOP |
| • Software Engineering | • Database Management | • Cloud Computing | • Computer Networks |

Leadership / Extracurricular

- Awarded TalentSprint WE Scholar 2023, ranking among the top 500 from 23,000 applicants nationwide.
- Ranked in Top 10 Teams at Smart India Hackathon for developing health-tech solutions addressing national challenges.
- Conducted 5+ coding workshops and mentored peers on AI/ML concepts, fostering women's participation in tech through outreach programs.