

# SANKALP TEWARI

## AI/ML ENGINEER

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### PROFESSIONAL SUMMARY

A Computer Science undergraduate and AI Engineer with hands-on experience across applied machine learning, backend architectures, and scalable web development. I build production-ready AI/ML solutions using PyTorch, LangChain, and modern web frameworks, always prioritizing performance, strict latency constraints, and a rigorous, detail-oriented mindset.

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### EDUCATION

Dr. Shakuntala Misra National Rehabilitation University, Lucknow , UP

#### Bachelor of Technology - Computer Science and Engineering

**Related Coursework:** DBMS , Machine Learning , Computer Network , Soft Computing , Computer Graphics , Web Technology

**CGPA:** 8.02/10.0

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### PROJECTS

#### VoiceTrace

- Real-Time Deepfake Detection: Integrated the AASIST-L neural network to continuously analyze streaming audio from live VoIP/WebRTC/SIP calls.
- High-Throughput Batched Inference: Architected an asynchronous Python (FastAPI/asyncio) backend that aggregates concurrent call audio into unified PyTorch tensors. This enables batched GPU/CPU forward passes, significantly maximizing multi-call processing performance.
- [Click to see live demo](#)

#### Commudle-Sense for Commudle

- Fault-Tolerant AI Search Pipeline: Designed a robust search extraction system that uses an LLM (Groq/Instructor) to parse natural language, backed by an automatic circuit-breaker and deterministic rule-based fallback to guarantee zero downtime during API rate limits or outages.
- Deep Security & Dynamic Data Redaction: Implemented multi-layered defenses including raw-query injection guards, suspicious content redaction, and parameterized SQLAlchemy expressions that enforce dynamic, role-based access control (RBAC) down to the row and column levels.
- [Click to see live demo](#)

#### CreatorGPT

- AI-Powered Content Generation: Integrated Hugging Face models via a Python backend to dynamically generate platform-specific copy and creative assets.
  - Full-Stack Implementation: Built a responsive React/Vite frontend paired with a robust FastAPI backend, ensuring seamless end-to-end performance and scalable deployment.
  - [Click to see live demo](#)
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### SKILLS

**Achievements:** Winner — SIH 2026 Internal - Won the internal SIH 2026 selection hackathon with VoiceTrace, an AI-powered voice-cloning impersonation detection system.

1st Runner-Up — Hack-e-Awadh-Secured 2nd place out of numerous teams with Commudle Sense, a semantic search system for natural-language discovery across developer communities.

**Tech Stacks:** Python , React.js , Streamlit , FastAPI , LangChain , PyTorch , scikit-learn , FAISS , Hugging Face , Docker , Git , RestApi

**Language:** English , Hindi