

TANYA BHARARA

AI Engineer

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SUMMARY

AI Engineer who builds and ships **Generative AI applications** end-to-end — from **LLM/RAG** pipelines and computer-vision models to the **full-stack** (React frontend, FastAPI backend, PostgreSQL) that serves them in production. Focused on real-time, scalable AI plat- forms such as automated interview systems, with a strong emphasis on performance optimization and production-ready deployment.

WORK EXPERIENCE

AI/ML Engineer (Remote)

NavGurukul (July 2025 – Present)

- Built and scaled the **AI Interviewer end-to-end**, an LLM voice-interview platform in production across **9 campuses**, serving **1000+ students monthly** at **≈3 (\$0.04) per 30-min interview**.
- Contributed to the Telangana Government's **Draw and Learn** initiative, a sketch-recognition system using **CNNs** trained on the Quick- Draw dataset in **AWS SageMaker**.
- Developed and deployed **AI-powered learning tools** used by students across NavGurukul campuses.

AI/ML Intern

BlackNGreen Mobile Solutions, Gurgaon (January 2025 – June 2025)

- Built **voice and chat agents** for Nepal's largest telecom, resolving customer queries in real time via multi-turn conversation, **RAG- based** context retrieval, and **Redis** caching.
- Contributed to a **multi-agent sales workflow** on **Vapi**, adaptable across industries to drive customer engagement.
- Benchmarked **vector databases** and **RAG evaluation** frameworks (Ragas) with R&D team for production model and retrieval choices.

AI/ML Intern

Dynamic Mavens, Noida (October 2024 – December 2024)

- Built a **vision-based product scanner** for a brewing-gadgets coffee brand.
- Engineered a **hybrid recommendation model** (item-item collaborative + content-based filtering), lifting click-through rate (CTR) on suggested items by **40%**.

SKILLS

Backend, Frontend & Databases: Python, FastAPI, Node.js, React, PostgreSQL, REST APIs, WebSockets, Event-Driven Systems

AI/ML & GenAI: NLP, RAG, LLM Fine-Tuning, Prompt Engineering, Transformers, STT/TTS, Model Evaluation, CNN, RNN, GAN, YOLO, PyTorch, TensorFlow

AI Agents & Frameworks: Multi-Agent Workflows, LangChain, LangGraph, AutoGen, Haystack, Hugging Face, Sentence Transformers

MLOps & Data: AWS SageMaker, MLflow, Vector Databases, Redis, ETL

Tools: Jupyter, Postman, Power BI, Tableau

PROJECTS

2025 AI Interviewer

- Built an AI platform that conducts **real-time voice interviews** (speech-to-text/text-to-speech + voice-activity detection), reads can- didate projects via OCR, and evaluates answers with an **LLM**.
- Ran interviews at **≈\$0.04 (3) per 30-min session** with sub-**3s** latency via client-side orchestration and edge API calls.
- Engineered a **JD-to-rubric engine**: turns a JD into a **CEFR** skill rubric, then **adapts questions to probe each required skill**.
- Built an **asynchronous scoring pipeline** that grades each interview into a leveled scorecard.
- Full-Stack: React, FastAPI, PostgreSQL, Cloudflare Worker, Hugging Face, Tesseract.

2025 Speech-to-Speech Training

- Trained **multi-accent voice models** (Hindi, Gujarati, Hinglish) using **VITS** end-to-end text-to-speech.
- Implemented a **client-side speech-to-speech pipeline** (Web Speech API for STT + synthesized voice out) running at **\$0.12/hour**.
- Built the training-data pipeline: **grapheme-to-phoneme** conversion (eSpeak) and **forced alignment** of audio to phonemes.
- Trained with PyTorch Lightning on **AWS SageMaker** and exported to **ONNX** for fast, low-cost inference.
- Tech Stack: VITS, PyTorch Lightning, MFA, eSpeak, ONNX, SageMaker.

2024 Product Lens

- Built a **vision-based product scanner** that identifies products from images for a coffee/brewing-gadgets brand.
- Automated the dataset pipeline — **labeling, augmentation, training and validation** on Roboflow — reaching **92%** detection accuracy.
- Implemented **image-similarity search** (OpenCV + scikit-learn) to match a scanned product to the catalog.
- Tech Stack: OpenCV, scikit-learn, Roboflow, image search.

EDUCATION

2021 - 2025	B.Tech — Artificial Intelligence and Machine Learning Delhi Technical Campus, GGSIPU	8.2 GPA
2020	Senior Secondary (Class XII) St. Froebel Sr. Sec. School	89%

CO-CURRICULAR ACTIVITIES

- **S&P Global Foundation StepForward Challenge** (MIT Solve  — **2026 global winner, 1 of 6**: contributed the **AI Interviewer** and **Speech-to-Speech** projects to NavGurukul's winning **AI Learning Ecosystem**, awarded a **\$200K** grant.
- Vice President, AWAAZ (Literature Society) — hosted and organized events.
- Host, GAMESCON — led gaming-fest operations.
- Top 10 finalist, National Hackathon.
- Captain, College Basketball Team.