Chaitya Shah

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EDUCATION

Columbia University - Fu Foundation School of Engineering and Applied Science — New York, NY
Candidate for Master of Science in Data Science — Aug 2025 - Dec 2026

University of Mumbai - Dwarkadas J. Sanghvi College of Engineering — Mumbai, India
Bachelor of Technology in Computer Engineering | GPA: 3.88/4 — Dec 2021 - May 2025

EXPERIENCE

SimPPL — New York, NY
Founding AI Engineer — Aug 2023 - May 2025

- Spearheaded a team of 4 in developing the MVP for an AI-powered audience analytics platform, scaling it to pilot with grants from **Mozilla and Google (exploreCSR)**, helping **New York Public Radio** boost engagement for 20K+ users.
- Engineered an **AI Agent** using LangGraph for our **UNICEF-incubated tech venture** to analyze 120k+ social media posts from Reddit, Telegram and YouTube delivering actionable insights on trending topics to stakeholders.
- Designed a predictive model that forecasts user clicks based on personas & trending topics, **boosting CTR by 8%**.
- Deployed full-stack AI pipelines on AWS, **processing 1M+ user interactions** to drive real-time content recommendations.

Avrio Energy — Berlin, Germany
Data Science Intern — Jun 2024 - Jul 2024

- Optimized energy usage across **70+ McDonald's outlets** in 22 countries by engineering a data pipeline to track appliance level consumption and visualize real-time insights via Power BI, **reducing operational costs by 15%**.
- Automated real-time fault detection with Airflow alerts and a **92% accurate XgBoost model**, cutting energy waste by 20%.

Infiheal — Mumbai, India
Artificial Intelligence Intern — Jun 2023 - Sep 2023

- Engineered a **RAG-based mental health chatbot** with LangChain & Haystack, **fine-tuned LLaMA** on 500k+ user chat transcripts to handle sensitive user queries, reducing hallucinations and **increasing user retention by 12%**.
- **Automated deployment** of scalable ML pipelines on AWS with Terraform & Docker, **saving 5+ hrs/week** of manual effort.

PUBLICATIONS

- Chaitya Shah, et al. "Can Social Media Platforms Transcend Political Labels? An Analysis of Neutral Conservations on Truth Social". International AAAI Conference on Web and Social Media 2024. **https://doi.org/10.36190/2024.17**
- C Shah, et al. "Sentence Restructuring with User-Controlled Difficulty using NLP". International Conference on Computing, Communication and Networking Technologies 2023, IEEE. **https://doi.org/10.1109/ICCCNT56998.2023.10307165**

PROJECTS

Fraud Detection in Ethereum Transactions | Research Intern at IIT Patna

- Designed a fraud detection system on **250k+ Ethereum transactions** using Graph Neural Networks (Temporal GATs) and Directed Random Walks to classify fraudulent nodes based on behavioral patterns, achieving **85% accuracy**.

GenAI-Powered Financial Advisory Platform

- Analyzed 100K+ financial data points to generate personalized savings insights; fine-tuned GPT-Turbo and integrated a FAISS vector database for document retrieval, **improving recommendation accuracy by 16%**.

Economic Policy Impact Analyzer

- Built an end-to-end ML system to assess the effect of Indian government policies on stock volatility by processing 10k+ news articles using NLP and an LSTM model, achieving **87% accuracy** in identifying policy-driven market movements.
- Estimated a statistically significant causal impact of 0.15 on volatility ($p = 0.04$) using **Causal Machine Learning**.

SKILLS

Programming & Web: C/C++, Python, Java, SQL, R, MATLAB, JavaScript, React, Next.js, Django, Flask, FastAPI
Machine Learning: Numpy, Pandas, Matplotlib, Scikit-Learn, Keras, LangChain, TensorFlow, PyTorch, OpenCV, NLTK
Databases, Analytics & Cloud: PostgreSQL, Redis, Power BI, BigQuery, GCP, AWS, Docker, Linux, Nginx

ACHIEVEMENTS

- Led a **30-member Coding department**, developing autonomous systems for Space Robotics, finishing 3rd at International Rover Challenge 2024 and 2nd at European Rover Challenge 2023, representing India in **6 International Competitions**.