REETH JAIN

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EDUCATION

- **Indian Institute of Technology, Roorkee**　　　　　　　　　　　　　　　　Uttarakhand, India
  B.Tech. in Chemical Engineering　　　　　　　　　　　　　　　　　　　　　　　*2022 – Present*

INTERNSHIPS

- **Data Science Intern | PocketFM**　　　　　　　　　　　　　　　　　　　May 2025 – July 2025
  - Built scalable pipelines on user behavior logs to surface early churn signals for ML-driven retention analysis.
  - Segmented 2M+ users using clustering to support personalization and churn risk modeling.
  - Developed NLP sentiment analysis on 50K+ reviews to extract product and content signals.
  - Evaluated A/B experiments using CTR, sessions, and impressions to validate model-driven features.

- **Data Analyst Intern | Paragon**　　　　　　　　　　　　　　　　　　　　Dec 2024 – Jan 2025
  - Cleaned and standardized multi-source sales data using SQL to improve downstream analytics reliability.
  - Performed EDA to uncover sales trends, customer behavior patterns, and operational bottlenecks.
  - Built optimized SQL queries and KPI tables to support analytics dashboards.
  - Applied clustering on customer purchase behavior to enable targeted segmentation strategies.

PROJECTS

- **Autonomous Security MLOps Platform | FastAPI, MLflow, Docker, GitHub Actions**　　[GitHub]
  - Built an end-to-end MLOps pipeline for automated model training, promotion, and deployment using MLflow.
  - Developed a secure FastAPI inference API with API-key authentication and low-latency predictions.
  - Implemented Production-to-Staging model fallback to ensure high availability and fault tolerance.
  - Designed GitHub Actions CI to validate inference imports, model loading, and Docker builds.
  - Deployed hardened Docker images with non-root execution and runtime health checks.

- **Hallucination-Aware Hybrid LLM System | RAG, QLoRA, FAISS, Phi-3 Mini**　　[GitHub]
  - Built a hallucination-aware RAG pipeline using FAISS dense retrieval with constrained prompt grounding.
  - Fine-tuned Phi-3 Mini (4k) using QLoRA with 4-bit quantization for parameter-efficient adaptation.
  - Enforced context-only generation with explicit refusal when answers lacked retrieved evidence.
  - Compared RAG vs non-RAG inference modes to empirically demonstrate hallucination reduction.
  - Developed a Streamlit dashboard with retrieved-document inspection for explainability.

- **Multi-Modal Emotion-Aware Music Recommendation System | Wav2Vec2, ResNet50**　　[GitHub]
  - Built a multi-modal music recommender using ResNet50, Wav2Vec2, and DistilRoBERTa for emotion inference.
  - Fine-tuned ResNet50 on RAF-DB and integrated HuggingFace transformers for real-time emotion inference.
  - Mapped detected emotions to Spotify genres using Spotipy for personalized music recommendations.
  - Developed an end-to-end Streamlit app supporting webcam, audio, and text-based inputs.

- **GenAI-Based YouTube & Web Summarizer | Whisper, LangChain, LLaMA-3**　　[GitHub]
  - Built a Streamlit-based system to summarize YouTube videos and web pages using Whisper and LangChain.
  - Implemented audio extraction, transcription, and summarization pipelines for long-form content.
  - Integrated Groq-hosted LLMs via LangChain for fast, high-quality abstractive summaries.

AWARDS / SCHOLARSHIPS / ACADEMIC ACHIEVEMENTS

Silver Medal in Techshilla 2.0 (Tech-Enhanced AI Interview Platform) | Pre-Finalist, WWT Unravel 2025 | AIR 6328 (JEE Main) | AIR 7306 (JEE Advanced) among 1.5 M candidates

TECHNICAL SKILLS

Programming: Python, SQL, C++
ML & DL: Scikit-learn, XGBoost, CNNs, Transformers, NLP, Computer Vision
GenAI & Agents: LLMs, Prompt Engineering, LangChain, RAG, Vector DBs, Agentic Workflows
MLOps: MLflow, Model Registry, CI/CD, Docker, GitHub Actions, AWS, Azure Monitoring
Data & Tools: Pandas, NumPy, FastAPI, REST APIs, Git, GCP