VOICEIQ

LLM-DRIVEN AUDIO ANALYSIS & AGENTIC RAG FOR SUPPORT CALL INTELLIGENCE
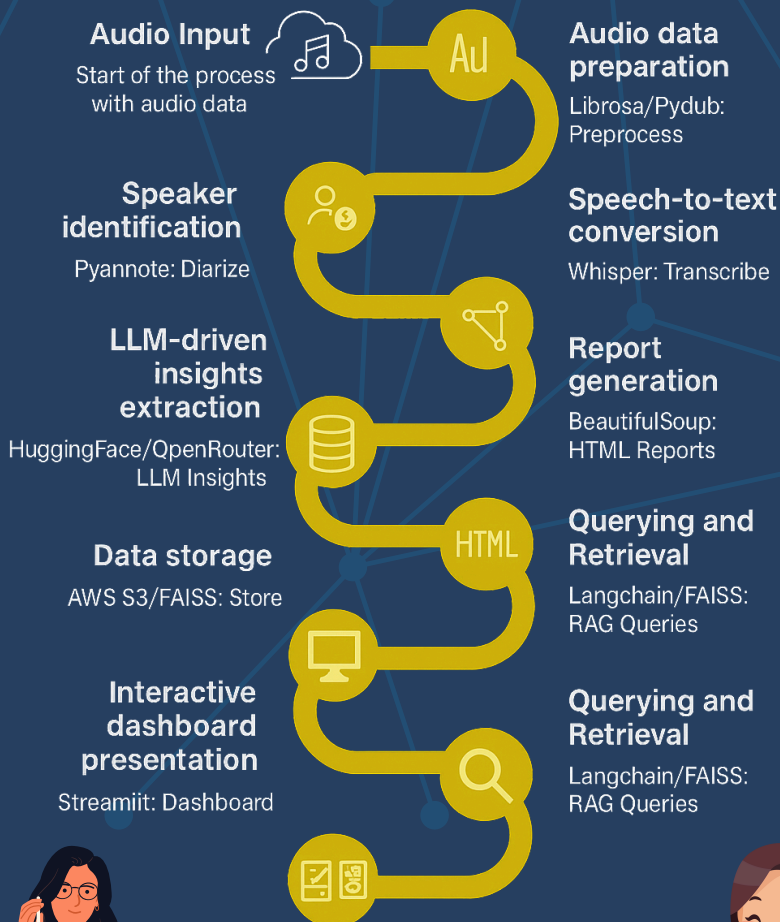
Key Features

AI-driven call intelligence that transforms conversations into scalable business insights
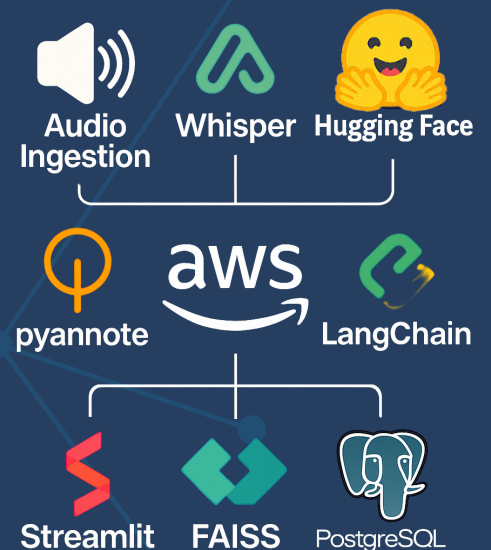
Streamline storage and compliance with lightweight, metadata-rich call records

Next-Gen Agentic RAG Interface for Knowledge Retrieval

Streamlined Audio Analysis and Reporting Pipeline

Audio Input
Start of the process with audio data

Au — Audio data preparation
Librosa/Pydub: Preprocess

Speaker identification
Pyannote: Diarize

Speech-to-text conversion
Whisper: Transcribe

LLM-driven insights extraction
HuggingFace/OpenRouter: LLM Insights

Report generation
BeautifulSoup: HTML Reports

Data storage
AWS S3/FAISS: Store

HTML — Querying and Retrieval
Langchain/FAISS: RAG Queries

Interactive dashboard presentation
Streamiit: Dashboard

Querying and Retrieval
Langchain/FAISS: RAG Queries

Tech Stack

Audio Ingestion   Whisper   Hugging Face

pyannote   aws   LangChain

Streamlit   FAISS   PostgreSQL

VoiceIQ vs. Industry Giants: A Feature-by-Feature Comparison

Features	VoiceIQ	Azure / Google / IBM Tools
Ease of Use	Friendly reports + chatbot interface	Mostly technical dashboards/ APIs
Speaker Separation	Clearly shows who said what	Basic support, not always clear
Emotion & Intent Capture	Understands tone and purpose	Basic or missing
Customizability	Flexible – open-source & modular	Limited to their cloud platforms
Cost & Storage	Highly efficient & lightweight	Expensive Audio Storage
Setup Requirements	Can run on local or cloud	Needs full cloud setup

Where VoiceIQ Meets Action?

Customer Experience Monitoring
- **Who**: customer service teams
- **How**: detect frequent frustration signals, prioritize calls for follow-up based on negative sentiment

Agent Performance Evaluation
- **Who**: call center managers, HR
- **How**: track each agent's performance on call responding, use sentiment analysis to assess soft skills

Risk and Compliance Monitoring
- **Who**: legal teams, compliance officers
- **How**: flag calls that involve sensitive keywords, audit calls with negative sentiment

Operational Efficiency Analysis
- **Who**: operation team, analytics team
- **How**: correlate high call volumes and repeated intents to backend failures, analyze sentiment drops in specific call types

TEAM 11
VoiceIQ
AI-Powered Audio Intelligence & Agentiic RAG Insights

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