

ECHOVERSE

Overview

EchoVerse is an AI-powered audiobook generator that transforms plain text into immersive audio experiences. By leveraging IBM Granite LLM and TTS APIs, it allows users to rewrite content in different tones and narrate it with natural-sounding voices.

Technology Stack

- Streamlit for interactive UI - Python for backend logic - IBM Granite LLM API for text rewriting - IBM Granite TTS API for text-to-speech - dotenv for environment variable management - Requests for API communication

Key Features

- Upload or paste text for audiobook generation - Multiple tone options (Neutral, Suspenseful, Inspiring, Professional, Casual, Narrative) - Choice of natural-sounding voices - Real-time text rewriting with IBM Granite LLM - High-quality audio output with TTS - Downloadable narration in MP3 format

Work Flow

1. User uploads or pastes text into the app. 2. User selects tone, voice, and model. 3. App builds a tailored prompt and sends it to the Granite LLM. 4. LLM rewrites the text according to the selected tone. 5. The rewritten text is sent to Granite TTS for voice synthesis. 6. User can listen, preview, and download the final audiobook narration.

Robustness

- Error handling for missing API keys and unexpected responses - Timeout mechanisms for API calls - Flexible tone and voice customization - Handles both uploaded text files and manual input

Conclusion

EchoVerse demonstrates the power of integrating LLMs and TTS systems to create personalized audiobook experiences. Its interactive UI, flexibility, and high-quality audio output make it a robust solution for AI-driven storytelling.