InterviewGPT - Real-time AI Interview Assistant

InterviewGPT is a real-time, voice-interactive assistant designed to simulate interview scenarios. It captures questions via microphone, transcribes them using AssemblyAI, and generates concise answers using OpenAI GPT. The application is built with Streamlit, includes user authentication, and ensures privacy through entity redaction using spaCy.

Project Pipeline:

1. User Authentication - Secure login via Streamlit Authenticator using pre-hashed passwords.

2. Voice Input - Microphone input captured using PyAudio at 16kHz, 3200-frame buffer.

3. Real-time Transcription - Audio streamed to AssemblyAI WebSocket and transcribed live.

4. GPT Response - Transcribed questions are sent to GPT with a prompt for a short answer.

5. Response Display - Chat interface shows both user questions and InterviewGPT answers.

6. Transcript Logging - All conversation text is saved to 'conversation.txt'.

7. Privacy Protection - Named Entity Recognition (spaCy) redacts sensitive info before saving to 'conversation_redacted.txt'.

Tech Stack Used:

- Streamlit
- AssemblyAI (ASR)
- OpenAI GPT (gpt-3.5-turbo)
- PyAudio
- spaCy NER
- streamlit_authenticator