Summary Report of Work Completed on Day 12

Topics: Speech Recognition, Text Summarization, Real-Time Processing, Performance Optimization

Activities:

1. **Explored Technologies for Audio Processing and Summarization:**
    - Integrated Whisper for audio transcription to convert spoken content into text and PyAnnote for speaker diarization, enabling speaker identification within recordings.
    - Employed the Transformers library with the Pegasus model for automated text summarization of transcriptions, aiming to create concise summaries of meetings or lengthy audio content.
2. **Extended Audio Intake and Real-Time Recognition:**
    - Configured the system to handle audio intake up to 6 hours to accommodate longer recordings, essential for capturing full meeting discussions.
    - Implemented PyAudio for real-time speech recognition, facilitating live audio transcription directly into the application.
3. **Performance Optimization Efforts:**
    - Encountered slow performance during transcript generation and focused on optimizing the process for quicker results, enhancing the efficiency of transcript production.

Goal: To establish an end-to-end pipeline that processes extended audio, identifies speakers, and generates concise summaries efficiently.