

# ■ Documentation: Meeting Notes & Action Item Extractor

## 1. Overview

This application is a Streamlit-based tool that converts meeting audio recordings into structured outputs. It provides: a full transcript of the conversation, a concise summary of meeting notes, and a list of action items and tasks identified from the discussion. The app is designed to help teams save time by quickly capturing the essence of meetings and identifying responsibilities.

## 2. Features

- Upload meeting audio files in formats such as MP3, WAV, and M4A
- Automatic speech-to-text transcription using Whisper (runs locally, no external API required)
- Summarization of the transcript into clear meeting notes using a Hugging Face transformer model
- Simple action item detection by identifying sentences with task-related language
- User-friendly interface built with Streamlit

## 3. Requirements

- Python 3.8 or higher
- Streamlit
- Whisper (speech-to-text)
- Hugging Face Transformers (summarization)
- PyTorch (required for Whisper)

## 4. How It Works

- Upload Audio: Users upload a meeting recording through the Streamlit interface.
- Transcription: The audio is transcribed into text using the Whisper model.
- Summarization: The transcript is condensed into concise meeting notes using a summarization model.
- Action Item Extraction: Sentences indicating tasks or responsibilities are extracted and displayed.
- Output Display: The transcript, summarized notes, and action items are shown clearly in the app.

## 5. Usage Instructions

- Launch the app by running it through Streamlit.
- Upload an audio recording of your meeting.
- Wait for the transcription and summarization process to complete.
- View the full transcript, summarized meeting notes, and extracted action items.

## **6. Example Workflow**

A user uploads a 30-minute meeting recording. The app generates a full transcript of the discussion, summarizes it into key points, and extracts action items such as 'John will prepare the financial report' or 'We need to schedule the next review'.

## **7. Limitations**

- Action item detection is based on simple keyword rules and may miss tasks expressed in indirect language.
- Long audio files may take time to process.
- Whisper requires sufficient compute power to transcribe large recordings efficiently.

## **8. Future Improvements**

- Use advanced NLP models (such as GPT) for more intelligent task extraction.
- Add speaker identification (who said what).
- Enable export of transcripts and notes into Word, PDF, or Notion.
- Support for multiple languages.