

Meeting Management Tool Documentation

1. Introduction

The Meeting Management Tool is a comprehensive solution designed to streamline the entire meeting process, from pre-meeting organization to post-meeting summary generation. This tool is divided into two main components:

- Pre-meeting management system: Helps organize discussion points and track meeting progress
- Post-meeting system: Generates summaries of the meeting using Large Language Models (LLMs)

This documentation provides a detailed explanation of the tool's structure, setup process, data flow, and the rationale behind the chosen technologies.

2. Project Structure

The project is organized into two main directories:

```
Dhiwise_round2/
|
|— Dhiwise_meet/
|   |— app.py
|   |— db.py
|   |— meetings.db
|   |— requirements.txt
|   |— static/
|   |— templates/
|   |— uploads/
|   |— venv/
|   └— test.py
|
|— Dhiwise_postmeet/
|   |— post_app.py
|   └— templates/
```

```
|   └─ uploads/
|
└─ README.md
```

3. Setup Instructions

Prerequisites:

- Python 3.8+
- Virtual environment (recommended)

Installation Steps:

1. Create a virtual environment:

```
python3 -m venv venv

# Activate the virtual environment
# For Windows:
venv\Scripts\activate
# For macOS/Linux:
source venv/bin/activate
```

2. Install required dependencies:

```
cd Dhiwise_meet
pip install -r requirements.txt
```

3. Run the pre-meeting tool:

```
python app.py
```

4. Run the post-meeting tool:

```
cd ../Dhiwise_postmeet
python post_app.py
```

4. Data Flow of the Project

Pre-Meeting Tool (Dhiwise_meet)

1. Document Upload: Users upload pre-meeting documents, which are stored and processed using PyPDF2.
2. Text Summarization: Extracted text is summarized using the Cohere API.
3. Manual Discussion Point Entry: Users can manually enter discussion points.
4. Marking Points as Discussed: Users can mark points as discussed or unresolved.

Post-Meeting Tool (Dhiwise_postmeet)

1. Video Upload: Users upload MP4 video files of recorded meetings.
2. Audio Extraction: MoviePy extracts audio from the uploaded video.
3. Transcription: AssemblyAI transcribes the extracted audio into text.
4. Text Summarization: Cohere API generates a summarized version of the meeting.

5. Why These LLMs and APIs Are Better

Cohere API

Cohere provides state-of-the-art language models for text summarization, optimized for natural language understanding and capable of handling complex business language.

AssemblyAI API

AssemblyAI offers high-accuracy transcriptions with advanced features like speaker diarization and punctuation insertion.

MoviePy

MoviePy is chosen for its ease of use and seamless integration into Python workflows for audio extraction from video files.

6. Test Cases

Several test cases have been implemented to ensure the tool's functionality:

- Adding single and multiple discussion points
- Handling empty discussion point entries
- Uploading and processing meeting videos

7. Detailed Code Explanation

This section provides an overview of the main components and their functionalities:

Pre-Meeting Tool

app.py

Main Flask application file handling routes and discussion point management.

db.py

Manages SQLite database operations for storing and retrieving discussion points.

Post-Meeting Tool

post_app.py

Handles video uploads, audio extraction, transcription, and summary generation using various APIs.

8. Conclusion

The Meeting Management Tool efficiently integrates document management, meeting tracking, and post-meeting summaries using advanced AI techniques. It streamlines the entire meeting process, from preparation to follow-up, enhancing productivity and communication within teams.