Auto Translate + Text-To-Speech (Mp3) App – Documentation

1. Overview

This app lets you:
- Input text by typing or uploading a file (.txt, .pdf, .csv, .xlsx)
- Automatically detect the language of the text
- Translate it into another language you choose
- Convert the translated text into an MP3 audio file
- Play the audio in the app and download it if needed

The app uses Gemini AI for translation and language detection, and gTTS for text-to-speech.

2. Setting Up the App

1. Install Python 3.9 or higher.
2. Install the required packages by running:
   pip install -r requirements.txt
   (Packages include:

```
streamlit>=1.25.0
gTTS>=2.3.0
PyPDF2>=3.0.0
pandas>=2.1.0
openpyxl>=3.1.0
google-genai>=0.15.0
```
)

3. Get a Gemini API key to use Gemini for translation.
4. Insert your API key in the code:

```
client = genai.Client(api_key="YOUR_API_KEY_HERE")
```

5. Run the app in the terminal:

```
streamlit run app.py
```

3. Using the App

1. Open the app in a browser.
2. Provide input text: either type in the text box or upload a file.
3. Select the output language from the dropdown menu (only gTTS-supported languages).
4. Click "Generate Audio":
   - The app detects the input language
   - Translates it to the selected language

- Generates MP3 audio
5. Listen in the app. The audio player has no download option under "More".
6. Download the MP3 file using the provided Download button.

4. Supported Languages
The app works only with languages supported by gTTS, such as:
English, French, Spanish, Hindi, Chinese, Japanese, German, Arabic, Hindi, Hungarian, Afrikaans, etc.

5. Limitations
- Requires an internet connection for Gemini API and gTTS.
- Only gTTS-supported languages can be spoken.
- Translation quality depends on Gemini; some complex sentences may not be perfect.
- Large files may take longer to process.

6. Challenges Faced
- Gemini sometimes added extra text like "Here's the translation…"; had to adjust prompts to return only the translated text.
- Only certain languages are supported by gTTS, so selections had to be limited.
- Removing the download option from the audio player required using a custom HTML tag.

7. Key Features
- Auto-detect input language
- Translate to selected output language (clean, no extra text)
- Generate MP3 audio
- Play audio without download under the player
- Separate download button for saving MP3
- Works with both typed text and uploaded files