Project Name: Bharatlaw Text-to-speech task

Introduction:

The Document Summarization App is designed to leverage a language model for extracting concise summaries from uploaded PDF documents. The app utilizes Streamlit for the user interface, LangChain for text processing, and the LaMini-Flan-T5-248M transformer model for summarization.

Problem Statement:

Reading lengthy documents can be time-consuming, and extracting key information efficiently is a challenge. The need for automated document summarization arises to save time and provide users with quick insights into the content of lengthy documents.

Objectives:

1. Develop a user-friendly document summarization application.
2. Implement a language model pipeline for effective summarization.
3. Allow users to upload PDF documents for processing.
4. Display the uploaded PDF for reference.
5. Provide a synthesized audio summary using text-to-speech.

Resources:

- Streamlit: UI development framework.
- LangChain: Text processing library.
- Transformers (Hugging Face): LaMini-Flan-T5-248M model for summarization.
- Pyttsx3: Python library for text-to-speech synthesis.

Proposed Solution:

The application allows users to upload a PDF document, which is then processed using LangChain for text splitting and LaMini-Flan-T5-248M for summarization. The summarized content is displayed on the UI, and an audio summary is generated using pyttsx3 for a more accessible user experience.

Result:

The user can upload a PDF document, view it on the interface, and obtain a summarized version of the content. The summarization process is efficient, providing users with key information from the document. Additionally, the text-to-speech feature enhances accessibility by providing an audio summary of the document.