Text summarizer

The Text Summarizer is a Python-based project that utilizes extractive and abstractive approaches to generate summaries for textual documents. It aims to provide a concise and condensed version of the input text, capturing its key information and main points

Features

- *Extractive Summarization: Utilizes frequency count to identify important sentences from the input text and combine them to form a summary.*
- *Abstractive Summarization: Uses transformer-based models through the Hugging Face 'summarization' pipeline to generate abstractive summaries.*
- *Preprocessing: Tokenizes and preprocesses the input text to prepare it for summarization.*
- *Evaluation: Human evaluation and ROUGE metrics for evaluating the quality of the generated summaries.*
- *User Interface: Provides a user-friendly interface for inputting text and generating summaries.*

Installation

1. *Clone the repository*

   git clone https://github.com/sharmashubham23/text-summarizer-project

2. *Install the required dependencies*
3. *Download the pre trained models:*
   a. *For extractive summarization, download the necessary language models and place them in the appropriate directory.*
   b. *For abstractive summarization, the Hugging Face Transformers library will automatically download the required models when running the code*

Usage

1. *Open the respective python file and adjust any configuration settings if needed.*
2. *Run the program:*
3. *Follow the instructions in the interface to input your text and choose the summarization approach.*
4. *View the generated summary and evaluation metrics in the output.*

Examples

1. *Extractive summary: Provide input text in "text" variable and execute the code.*

   Text = """   Input Text …..   """

2. *Abstractive summary: Provide web URL, extracting the text and summarizing will be handled by the program*

   URL = "https://www.bbc.com/future/article/20230516-apollo-how-moon-missions-changed-the-modern-world"

   Output will be show in the console and also get stored in text file