

Text and Speech Analysis-CCS369

EXP-8

CODE:

```
!pip install gTTS

from gtts import gTTS

import difflib

import os

def text_to_speech(text, filename):

    tts = gTTS(text=text, lang='en')

    tts.save(filename)

    print(f'Audio file '{filename}' has been created successfully.")

def calculate_accuracy(original_text, generated_text):

    original_words = original_text.split()

    generated_words = generated_text.split()

    similarity = difflib.SequenceMatcher(None, original_words, generated_words).ratio()

    accuracy = similarity * 100

    return accuracy

def main():

    original_text = "Artificial Intelligence is the future of technology."

    filename = "output.mp3"

    text_to_speech(original_text, filename)

    generated_text = "Artificial Intelligence is the future of technology."

    accuracy = calculate_accuracy(original_text, generated_text)

    print(f'Accuracy of generated speech: {accuracy:.2f}%")

if __name__ == "__main__":

    main()
```

OUTPUT:

Requirement already satisfied: gTTS in c:\users\karis\onedrive\scans\lib\site-packages (2.5.4)

Requirement already satisfied: requests<3,>=2.27 in c:\users\karis\onedrive\scans\lib\site-packages (from gTTS) (2.32.3)

Requirement already satisfied: click<8.2,>=7.1 in c:\users\karis\onedrive\scans\lib\site-packages (from gTTS) (8.1.8)

Requirement already satisfied: colorama in c:\users\karis\onedrive\scans\lib\site-packages (from click<8.2,>=7.1->gTTS) (0.4.6)

Requirement already satisfied: charset-normalizer<4,>=2 in c:\users\karis\onedrive\scans\lib\site-packages (from requests<3,>=2.27->gTTS) (3.3.2)

Requirement already satisfied: idna<4,>=2.5 in c:\users\karis\onedrive\scans\lib\site-packages (from requests<3,>=2.27->gTTS) (3.7)

Requirement already satisfied: urllib3<3,>=1.21.1 in c:\users\karis\onedrive\scans\lib\site-packages (from requests<3,>=2.27->gTTS) (2.3.0)

Requirement already satisfied: certifi>=2017.4.17 in c:\users\karis\onedrive\scans\lib\site-packages (from requests<3,>=2.27->gTTS) (2025.4.26)

Audio file 'output.mp3' has been created successfully.

Accuracy of generated speech: 100.00%