Text-To-Speech-Conversion

September 13, 2024

1 1. Text to speech conversion using GTTS

1.1 GTTS:- The gTTS (Google Text-to-Speech) library is a Python library and command-line tool that allows you to convert text into speech using Google's Text-to-Speech API. It generates spoken audio from text using a variety of languages and accents.

[5]:
```
!pip install gtts
```

```
Collecting gtts
  Downloading gTTS-2.5.3-py3-none-any.whl.metadata (4.1 kB)
Requirement already satisfied: requests<3,>=2.27 in d:\anaconda3\lib\site-
packages (from gtts) (2.32.2)
Requirement already satisfied: click<8.2,>=7.1 in d:\anaconda3\lib\site-packages
(from gtts) (8.1.7)
Requirement already satisfied: colorama in d:\anaconda3\lib\site-packages (from
click<8.2,>=7.1->gtts) (0.4.6)
Requirement already satisfied: charset-normalizer<4,>=2 in
d:\anaconda3\lib\site-packages (from requests<3,>=2.27->gtts) (2.0.4)
Requirement already satisfied: idna<4,>=2.5 in d:\anaconda3\lib\site-packages
(from requests<3,>=2.27->gtts) (3.7)
Requirement already satisfied: urllib3<3,>=1.21.1 in d:\anaconda3\lib\site-
packages (from requests<3,>=2.27->gtts) (2.2.2)
Requirement already satisfied: certifi>=2017.4.17 in d:\anaconda3\lib\site-
packages (from requests<3,>=2.27->gtts) (2024.7.4)
Downloading gTTS-2.5.3-py3-none-any.whl (29 kB)
Installing collected packages: gtts
Successfully installed gtts-2.5.3
```

[9]:
```
from gtts import gTTS
from IPython.display import Audio

text_to_speech = gTTS("""
Google Text-to-Speech, abbreviated as gTTS, is a Python library that allows you␣
 ↪to convert text into speech using the Google Text-to-Speech API.
It supports multiple languages and accents. With just a few lines of code, you␣
 ↪can generate speech and even save it as an audio file for future use.
This makes it a handy tool for creating voiceovers or automating speech tasks␣
 ↪in your projects.
```

```
""")
text_to_speech.save('text_to_speech.wav')
sound_file = 'text_to_speech.wav'

# .wav file, short for Waveform Audio File Format, is a standard audio file␣
 ↪format used for storing waveform data.
Audio(sound_file, autoplay = False)
```

[9]:
```
<IPython.lib.display.Audio object>
```

1.2 Changing the gender using pyttsx3

[12]:
```
!pip install pyttsx3
```

```
Collecting pyttsx3
  Downloading pyttsx3-2.91-py3-none-any.whl.metadata (3.8 kB)
Collecting comtypes (from pyttsx3)
  Downloading comtypes-1.4.7-py3-none-any.whl.metadata (6.5 kB)
Collecting pypiwin32 (from pyttsx3)
  Downloading pypiwin32-223-py3-none-any.whl.metadata (236 bytes)
Requirement already satisfied: pywin32 in d:\anaconda3\lib\site-packages (from
pyttsx3) (305.1)
Downloading pyttsx3-2.91-py3-none-any.whl (33 kB)
Downloading comtypes-1.4.7-py3-none-any.whl (226 kB)
   ---------------------------------------- 0.0/226.8 kB ? eta -:--:--
   --------------------------- ------------ 163.8/226.8 kB 4.8 MB/s eta 0:00:01
   ---------------------------------------- 226.8/226.8 kB 4.6 MB/s eta 0:00:00
Downloading pypiwin32-223-py3-none-any.whl (1.7 kB)
Installing collected packages: pypiwin32, comtypes, pyttsx3
Successfully installed comtypes-1.4.7 pypiwin32-223 pyttsx3-2.91
```

[14]:
```
import pyttsx3
from IPython.display import Audio

text = """
Google Text-to-Speech, abbreviated as gTTS, is a Python library that allows you␣
 ↪to convert text into speech using the Google Text-to-Speech API.
It supports multiple languages and accents. With just a few lines of code, you␣
 ↪can generate speech and even save it as an audio file for future use.
This makes it a handy tool for creating voiceovers or automating speech tasks␣
 ↪in your projects.
"""

audio = pyttsx3.init() #initializes the text-to-speech engine.
audio.setProperty('rate', 150) #adjust the speed
audio.setProperty('volume', 0.8) #adjust the volume

#change the voice
```

```
voice = audio.getProperty('voices')

# 0 for male : 1 for female
audio.setProperty('voice', voice[0].id) #for male voice
#audio.setProperty('voice', voice[1].id) for female voice

#text-to speech conversion
audio.say(text)

#save the audio file
audio.save_to_file(text, 'test_male_Voice.mp3')
#audio.save_to_file(text, 'test_female_Voice.mp3')

audio.runAndWait()
#.runAndwait() is a fundamental method  in pyttsx3 for ensuring that the␣
 ↪text_to _speech engine
#completes its tasks before moving on.
```