Text_To_Speech Conversion

September 13, 2024

1 Text to Speech conversion using GTTS

1.1 GTTS: Google text to speech

[6]:
```
!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
c:\users\tanishq\anaconda3\lib\site-packages (from gtts) (2.32.3)
Requirement already satisfied: click<8.2,>=7.1 in
c:\users\tanishq\anaconda3\lib\site-packages (from gtts) (8.1.7)
Requirement already satisfied: colorama in c:\users\tanishq\anaconda3\lib\site-
packages (from click<8.2,>=7.1->gtts) (0.4.6)
Requirement already satisfied: charset-normalizer<4,>=2 in
c:\users\tanishq\anaconda3\lib\site-packages (from requests<3,>=2.27->gtts)
(2.0.4)
Requirement already satisfied: idna<4,>=2.5 in
c:\users\tanishq\anaconda3\lib\site-packages (from requests<3,>=2.27->gtts)
(3.4)
Requirement already satisfied: urllib3<3,>=1.21.1 in
c:\users\tanishq\anaconda3\lib\site-packages (from requests<3,>=2.27->gtts)
(2.0.7)
Requirement already satisfied: certifi>=2017.4.17 in
c:\users\tanishq\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
```

[32]:
```
from gtts import gTTS
from IPython.display import Audio

text_to_speech = gTTS('''Hello, I am Tanishq. I am a data science student. In␣
 ↪this project i am using
google-text-to-speech for conversion. Lets explore functionalities of python␣
 ↪together. Have a great learning.''')
```

```
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)
```

[32]: <IPython.lib.display.Audio object>

2 Text to Speech conversion using GTTS

2.0.1 Changing the gender using pyttsx3

[23]:
```
!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 c:\users\tanishq\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 -:--:--
   ------- -------------------------------- 41.0/226.8 kB 2.0 MB/s eta 0:00:01
   ------------------ --------------------- 112.6/226.8 kB 1.7 MB/s eta 0:00:01
   ---------------------------- ---------- 174.1/226.8 kB 1.5 MB/s eta 0:00:01
   ---------------------------------------  225.3/226.8 kB 1.3 MB/s eta 0:00:01
   ---------------------------------------- 226.8/226.8 kB 1.3 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
```

[30]:
```
import pyttsx3
from IPython.display import Audio

text = '''Hello, I am Tanishq. I am a data science student. In this project i␣
 ↪am using
google-text-to-speech for conversion. Lets explore functionalities of python␣
 ↪together. Have a great learning.'''

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 voices
voice = audio.getProperty('voices') #retrieves a list of available voices that␣
 ↪can be used by the text-to-speech engine.

# 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.
```