

# TASK

## Problem Statements :

- Create a voice cloning model that can generate a synthetic voice that sounds like a specific person. Here extract a voice of a speaker from online who is for example giving a speech/ TED talk in (English/Hindi/Telugu) for at least 1 minute. Clone this speaker's voice to a different language (English/Hindi/Telugu) with the same pitch, and audio tone, and it should be able to reproduce the unique vocal characteristics of the target speaker.
- Example: (Let's say you have extracted audio of Elon Musk giving a speech in English, your task is to change the language of Elon Musk's same speech to another language to Hindi/Telugu. It should be as if Elon Musk himself is talking in Hindi/Telugu).

Here's a high-level overview of the my complete task:

- Preprocessing
- Language Detection
- Translation (Language Conversion)
- TTS Engine Selection
- Voice Style Selection
- Synthesis
- Post-processing
- Output

```
In [1]: from gtts import gTTS  
        from langdetect import detect
```

```
In [2]: # Input the text in any Language  
        input_text = "Hello, this is a sample text to be converted to Hindi."
```

```
In [3]: # i have generate a Language detection  
        input_language = detect(input_text)
```

```
In [4]: # i have generate Target Language  
        target_language = "hi" # i have convert to Hindi
```

```
In [5]: # next, Language translation
if input_language != target_language:
    # Implement translation logic here
    # For example, using the googletrans library
    from googletrans import Translator
    translator = Translator()
    translated_text = translator.translate(input_text, src=input_language, des
else:
    translated_text = input_text

# Select a TTS engine
tts = gTTS(text=translated_text, lang=target_language, slow=False)

# Save the synthesized speech to an audio file
tts.save("output.mp3")

print("Speech generated and saved as 'output.mp3'")
```

Speech generated and saved as 'output.mp3'

```
In [6]: import os
import pygame
from gtts import gTTS
from langdetect import detect
from googletrans import Translator

pygame 2.5.2 (SDL 2.28.3, Python 3.11.4)
Hello from the pygame community. https://www.pygame.org/contribute.html (http://www.pygame.org/contribute.html)
```

```
In [7]: # this is the input text in any Language
input_text = "Hello, this is a sample text to be converted to Hindi."
```

```
In [8]: # this is Language detection
input_language = detect(input_text)
```

```
In [9]: # i have create Target Language
target_language = "hi" #hindi
```

```
In [10]: # Language translation
if input_language != target_language:
    # Implement translation logic here
    translator = Translator()
    translated_text = translator.translate(input_text, src=input_language, des
else:
    translated_text = input_text

# Select a TTS engine
tts = gTTS(text=translated_text, lang=target_language, slow=False)

# Specify the full path to save the synthesized speech in the "Downloads" dire
output_file = 'C:/Users/chenn/Downloads/output.mp3'
tts.save(output_file)

# Initialize pygame mixer
pygame.mixer.init()

# Load the audio file
pygame.mixer.music.load(output_file)

# Play the audio
pygame.mixer.music.play()

while pygame.mixer.music.get_busy():
    pygame.time.Clock().tick(10)

print("Speech generated and saved as 'output.mp3' in 'C:/Users/chenn/Downloads
```

Speech generated and saved as 'output.mp3' in 'C:/Users/chenn/Downloads'

## ***The End***