

```
In [1]: !python -m ensurepip --upgrade # install pip on jupyter lab
```

```
Defaulting to user installation because normal site-packages is not writeable
Looking in links: /tmp/tmp0xpcy3xs
Requirement already satisfied: setuptools in /usr/local/lib/python3.9/site-packages
(58.1.0)
Requirement already satisfied: pip in /home/jovyan/.local/lib/python3.9/site-packages
(24.2)
```

```
In [2]: pip install gradio # install graio for UI
```

Defaulting to user installation because normal site-packages is not writeable  
Requirement already satisfied: gradio in /home/jovyan/.local/lib/python3.9/site-packages (4.44.1)  
Requirement already satisfied: aiofiles<24.0,>=22.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (23.2.1)  
Requirement already satisfied: asyncio<5.0,>=3.0 in /usr/local/lib/python3.9/site-packages (from gradio) (3.6.2)  
Requirement already satisfied: fastapi<1.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (0.115.2)  
Requirement already satisfied: ffmpeg in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (0.4.0)  
Requirement already satisfied: gradio-client==1.3.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (1.3.0)  
Requirement already satisfied: httpx>=0.24.1 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (0.27.2)  
Requirement already satisfied: huggingface-hub>=0.19.3 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (0.25.2)  
Requirement already satisfied: importlib-resources<7.0,>=1.3 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (6.4.5)  
Requirement already satisfied: jinja2<4.0 in /usr/local/lib/python3.9/site-packages (from gradio) (3.1.4)  
Requirement already satisfied: markupsafe~~2.0 in /usr/local/lib/python3.9/site-packages (from gradio) (2.1.5)  
Requirement already satisfied: matplotlib~~3.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (3.9.2)  
Requirement already satisfied: numpy<3.0,>=1.0 in /usr/local/lib/python3.9/site-packages (from gradio) (1.24.3)  
Requirement already satisfied: orjson~=3.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (3.10.7)  
Requirement already satisfied: packaging in /usr/local/lib/python3.9/site-packages (from gradio) (24.0)  
Requirement already satisfied: pandas<3.0,>=1.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (2.2.3)  
Requirement already satisfied: pillow<11.0,>=8.0 in /usr/local/lib/python3.9/site-packages (from gradio) (9.5.0)  
Requirement already satisfied: pydantic>=2.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (2.9.2)  
Requirement already satisfied: pydub in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (0.25.1)  
Requirement already satisfied: python-multipart>=0.0.9 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (0.0.12)  
Requirement already satisfied: pyyaml<7.0,>=5.0 in /usr/local/lib/python3.9/site-packages (from gradio) (6.0)  
Requirement already satisfied: ruff>=0.2.2 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (0.6.9)  
Requirement already satisfied: semantic-version~~2.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (2.10.0)  
Requirement already satisfied: tomlkit==0.12.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (0.12.0)  
Requirement already satisfied: typer<1.0,>=0.12 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (0.12.5)  
Requirement already satisfied: typing-extensions~~4.0 in /usr/local/lib/python3.9/site-packages (from gradio) (4.11.0)  
Requirement already satisfied: urllib3~~2.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio) (2.2.3)  
Requirement already satisfied: uvicorn>=0.14.0 in /home/jovyan/.local/lib/python3.9/

```
site-packages (from gradio) (0.31.1)
Requirement already satisfied: fsspec in /home/jovyan/.local/lib/python3.9/site-packages (from gradio-client==1.3.0->gradio) (2024.9.0)
Requirement already satisfied: websockets<13.0,>=10.0 in /home/jovyan/.local/lib/python3.9/site-packages (from gradio-client==1.3.0->gradio) (12.0)
Requirement already satisfied: idna>=2.8 in /usr/local/lib/python3.9/site-packages (from anyio<5.0,>=3.0->gradio) (3.4)
Requirement already satisfied: sniffio>=1.1 in /usr/local/lib/python3.9/site-packages (from anyio<5.0,>=3.0->gradio) (1.3.0)
Requirement already satisfied: starlette<0.41.0,>=0.37.2 in /home/jovyan/.local/lib/python3.9/site-packages (from fastapi<1.0->gradio) (0.39.2)
Requirement already satisfied: certifi in /usr/local/lib/python3.9/site-packages (from httpx>=0.24.1->gradio) (2022.12.7)
Requirement already satisfied: httpcore==1.* in /home/jovyan/.local/lib/python3.9/site-packages (from httpx>=0.24.1->gradio) (1.0.6)
Requirement already satisfied: h11<0.15,>=0.13 in /home/jovyan/.local/lib/python3.9/site-packages (from httpcore==1.*->httpx>=0.24.1->gradio) (0.14.0)
Requirement already satisfied: filelock in /home/jovyan/.local/lib/python3.9/site-packages (from huggingface-hub>=0.19.3->gradio) (3.16.1)
Requirement already satisfied: requests in /home/jovyan/.local/lib/python3.9/site-packages (from huggingface-hub>=0.19.3->gradio) (2.32.3)
Requirement already satisfied: tqdm>=4.42.1 in /usr/local/lib/python3.9/site-packages (from huggingface-hub>=0.19.3->gradio) (4.65.0)
Requirement already satisfied: zipp>=3.1.0 in /usr/local/lib/python3.9/site-packages (from importlib-resources<7.0,>=1.3->gradio) (3.18.2)
Requirement already satisfied: contourpy>=1.0.1 in /home/jovyan/.local/lib/python3.9/site-packages (from matplotlib~3.0->gradio) (1.3.0)
Requirement already satisfied: cycler>=0.10 in /home/jovyan/.local/lib/python3.9/site-packages (from matplotlib~3.0->gradio) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in /home/jovyan/.local/lib/python3.9/site-packages (from matplotlib~3.0->gradio) (4.54.1)
Requirement already satisfied: kiwisolver>=1.3.1 in /home/jovyan/.local/lib/python3.9/site-packages (from matplotlib~3.0->gradio) (1.4.7)
Requirement already satisfied: pyparsing>=2.3.1 in /home/jovyan/.local/lib/python3.9/site-packages (from matplotlib~3.0->gradio) (3.2.0)
Requirement already satisfied: python-dateutil>=2.7 in /usr/local/lib/python3.9/site-packages (from matplotlib~3.0->gradio) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in /home/jovyan/.local/lib/python3.9/site-packages (from pandas<3.0,>=1.0->gradio) (2024.2)
Requirement already satisfied: tzdata>=2022.7 in /home/jovyan/.local/lib/python3.9/site-packages (from pandas<3.0,>=1.0->gradio) (2024.2)
Requirement already satisfied: annotated-types>=0.6.0 in /home/jovyan/.local/lib/python3.9/site-packages (from pydantic>=2.0->gradio) (0.7.0)
Requirement already satisfied: pydantic-core==2.23.4 in /home/jovyan/.local/lib/python3.9/site-packages (from pydantic>=2.0->gradio) (2.23.4)
Requirement already satisfied: click>=8.0.0 in /home/jovyan/.local/lib/python3.9/site-packages (from typer<1.0,>=0.12->gradio) (8.1.7)
Requirement already satisfied: shellingham>=1.3.0 in /home/jovyan/.local/lib/python3.9/site-packages (from typer<1.0,>=0.12->gradio) (1.5.4)
Requirement already satisfied: rich>=10.11.0 in /home/jovyan/.local/lib/python3.9/site-packages (from typer<1.0,>=0.12->gradio) (13.9.2)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.9/site-packages (from python-dateutil>=2.7->matplotlib~3.0->gradio) (1.16.0)
Requirement already satisfied: markdown-it-py>=2.2.0 in /home/jovyan/.local/lib/python3.9/site-packages (from rich>=10.11.0->typer<1.0,>=0.12->gradio) (3.0.0)
Requirement already satisfied: pygments<3.0.0,>=2.13.0 in /usr/local/lib/python3.9/s
```

```
ite-packages (from rich>=10.11.0->typer<1.0,>=0.12->gradio) (2.18.0)
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.9/
site-packages (from requests->huggingface-hub>=0.19.3->gradio) (3.1.0)
Requirement already satisfied: mdurl~0.1 in /home/jovyan/.local/lib/python3.9/site-
packages (from markdown-it-py>=2.2.0->rich>=10.11.0->typer<1.0,>=0.12->gradio) (0.1.
2)
Note: you may need to restart the kernel to use updated packages.
```

In [3]: pip install SpeechRecognition

```
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: SpeechRecognition in /home/jovyan/.local/lib/python3.
9/site-packages (3.10.4)
Requirement already satisfied: requests>=2.26.0 in /home/jovyan/.local/lib/python3.
9/site-packages (from SpeechRecognition) (2.32.3)
Requirement already satisfied: typing-extensions in /usr/local/lib/python3.9/site-pa
ckages (from SpeechRecognition) (4.11.0)
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.9/
site-packages (from requests>=2.26.0->SpeechRecognition) (3.1.0)
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.9/site-package
s (from requests>=2.26.0->SpeechRecognition) (3.4)
Requirement already satisfied: urllib3<3,>=1.21.1 in /home/jovyan/.local/lib/python
3.9/site-packages (from requests>=2.26.0->SpeechRecognition) (2.2.3)
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.9/site-p
ackages (from requests>=2.26.0->SpeechRecognition) (2022.12.7)
Note: you may need to restart the kernel to use updated packages.
```

In [4]:

```
import openai
import os
import gradio as gr
from dotenv import load_dotenv, find_dotenv
import requests
import speech_recognition as sr # Speech recognition for live transcription
```

```
# Load environment variables
_ = load_dotenv(find_dotenv())
openai.api_key = os.getenv('OPENAI_API_KEY')

# Function to generate lyrics based on description, genre, emotion, and languages
def generate_lyrics(description, genre, emotion, languages, english_script):
    output_lyrics = ""

    for language in languages:
        prompt = (
            f"Compose original song lyrics directly in {language}, based on the fol
            f"Ensure the lyrics follow a {genre} style, evoke the emotion of {emoti
            f"Make sure the lyrics are musically synchronized, and not just a trans
            "\n\nLyrics:"
        )

        chat_completion = openai.ChatCompletion.create(
            model="gpt-3.5-turbo",
            messages=[{"role": "user", "content": prompt}],
            max_tokens=3000,
            temperature=0.8
        )
```

```

lyrics = chat_completion.choices[0].message['content']
output_lyrics += f"Language: {language}\n{lyrics}\n\n"

if english_script and language != "English":
    english_script_prompt = (
        f"Now provide the above lyrics in {language} but written using the
        \"The text should maintain the original meaning while using English
    ")
    english_script_completion = openai.ChatCompletion.create(
        model="gpt-3.5-turbo",
        messages=[{"role": "user", "content": english_script_prompt}],
        max_tokens=300,
        temperature=0.7
    )
    english_script_lyrics = english_script_completion.choices[0].message['c
output_lyrics += f"English Script for {language}:\n{english_script_lyri

return output_lyrics

# Function to generate TTS from Lyrics
def generate_audio(lyrics, language_code):
    api_key = "YOUR_API_KEY" # Replace with your valid VoiceRSS API key
    tts_endpoint = "https://api.voicerss.org/"
    params = {
        "key": api_key,
        "hl": language_code,
        "src": lyrics,
        "r": "0", # Speech rate (0 is default, change if needed)
        "c": "wav", # Audio format (wav)
        "f": "16khz_16bit_stereo" # Audio quality
    }

    response = requests.get(tts_endpoint, params=params)

    # Check if the response was successful
    if response.status_code == 200:
        audio_file = "generated_lyrics.wav"
        with open(audio_file, 'wb') as f:
            f.write(response.content)
        return audio_file
    else:
        print("Error in TTS API request:", response.status_code, response.text)
        return None

# Function to handle real-time transcription
def transcribe_audio(audio_file):
    recognizer = sr.Recognizer()
    with sr.AudioFile(audio_file) as source:
        audio = recognizer.record(source)
    try:
        transcription = recognizer.recognize_google(audio)
    except sr.UnknownValueError:
        transcription = "Unable to understand the audio."
    except sr.RequestError:

```



```
/home/jovyan/.local/lib/python3.9/site-packages/gradio/components/dropdown.py:188: UserWarning: The value passed into gr.Dropdown() is not in the list of choices. Please update the list of choices to include: Select a genre or set allow_custom_value=True.  
    warnings.warn(  
/home/jovyan/.local/lib/python3.9/site-packages/gradio/analytics.py:106: UserWarning: IMPORTANT: You are using gradio version 4.44.1, however version 5.0.1 is available, please upgrade.  
-----  
    warnings.warn(  
Running on local URL: http://127.0.0.1:7860  
Running on public URL: https://a5e6e8d297f877c931.gradio.live
```

This share link expires in 72 hours. For free permanent hosting and GPU upgrades, run `gradio deploy` from Terminal to deploy to Spaces (<https://huggingface.co/spaces>)



Loading...

Use via API · Built with Gradio

Out[4]:

```
Error in TTS API request: 404 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"/>
<title>404 - File or directory not found.</title>
<style type="text/css">
<!--
body{margin:0;font-size:.7em;font-family:Verdana, Arial, Helvetica, sans-serif;background-color:#EEEEEE;}
fieldset{padding:0 15px 10px 15px;}
h1{font-size:2.4em;margin:0;color:#FFF;}
h2{font-size:1.7em;margin:0;color:#CC0000;}
h3{font-size:1.2em;margin:10px 0 0 0;color:#000000;}
#header{width:96%;margin:0 0 0 0;padding:6px 2% 6px 2%;font-family:"trebuchet MS", Verdana, sans-serif;color:#FFF;
background-color:#555555;}
#content{margin:0 0 0 2%;position:relative;}
.content-container{background:#FFF;width:96%;margin-top:8px;padding:10px;position:relative;}
-->
</style>
</head>
<body>
<div id="header"><h1>Server Error</h1></div>
<div id="content">
<div class="content-container"><fieldset>
<h2>404 - File or directory not found.</h2>
<h3>The resource you are looking for might have been removed, had its name changed, or is temporarily unavailable.</h3>
</fieldset></div>
</div>
</body>
</html>
```

```
Error in TTS API request: 404 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"/>
<title>404 - File or directory not found.</title>
<style type="text/css">
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fieldset{padding:0 15px 10px 15px;}
h1{font-size:2.4em;margin:0;color:#FFF;}
h2{font-size:1.7em;margin:0;color:#CC0000;}
h3{font-size:1.2em;margin:10px 0 0 0;color:#000000;}
#header{width:96%;margin:0 0 0 0;padding:6px 2% 6px 2%;font-family:"trebuchet MS", Verdana, sans-serif;color:#FFF;
background-color:#555555;}
#content{margin:0 0 0 2%;position:relative;}
.content-container{background:#FFF;width:96%;margin-top:8px;padding:10px;position:relative;}
-->
```

```
</style>
</head>
<body>
<div id="header"><h1>Server Error</h1></div>
<div id="content">
  <div class="content-container"><fieldset>
    <h2>404 - File or directory not found.</h2>
    <h3>The resource you are looking for might have been removed, had its name change
d, or is temporarily unavailable.</h3>
  </fieldset></div>
</div>
</body>
</html>
```

In [ ]: