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In [1]: !pip3 install SpeechRecognition pydub

Requirement already satisfied: SpeechRecognition in /home/shreyz-max/anaconda3/lib/python3.8/site-packages (3.8.1)
Requirement already satisfied: pydub in /home/shreyz-max/anaconda3/lib/python3.8/site-packages (0.25.1)

In [2]: import speech_recognition as sr

In [3]: filename = "audio123.wav"

In [4]: # initialize the recognizer
r = sr.Recognizer()

In [5]: # open the file
with sr.AudioFile(filename) as source:
    # listen for the data (load audio to memory)
    audio_data = r.record(source)
    # recognize (convert from speech to text)
    text = r.recognize_google(audio_data)
    print(text)
```

hi good evening everyone today a to speak about artificial intelligence branch of computer science that develop s machines and software with human like intelligence artificial intelligence is the ability of the computer pro gram aur machine to think and it is also a field of study which tries to make computer smart they work on their own without being in contact with commands John mccarthy was came up with name artificial intelligence in 1955 in general use the term artificial intelligence means a machine which mimics human cognition at least some of t he things we associate with the other mind such as learning problem solving can be done by computers the not in the same way as a way to address capital and Michael Henry define as the system's ability to correctly interrup t external data to learn from such that Tata and to use the learning to achieve specific goal and staff through flexible and an ideal intelligent machine is a flexible edit agent which receives its environment and take acti on to maximize its chance of success at some cool as muscles become increasing the capable mental facilities on e-third to require intelligence or removed from the definition for example optical character recognition is no longer perceived as an example of at artificial intelligence it is just a routine Technology at present we used the term for successful in understanding human speed can tempting at high level in strategy game system self dr iving Cars interpreting Complex data some people also consider a as a danger to humanity if it is called used t o progress at its current affairs and extreme goal of their research is to create computer programs that can le arn solve problem think logically in practice however most applications have big on problem with computers can do well searching databases and doing calculations are things computer do better than people on the other hand receiving its environment in any real sense is way beyond present day computing involves many different fields of Computer Science Mathematics linguistics and psychology and neuroscience and philosophy eventually research effort to create a General artificial intelligence which can solve many problems instead of focusing on what on just one researchers are also trying to create creative and emotional AI which can possibly empathise and creat or many approaches and tools have in tri borrowing from the management literature

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In [6]: # importing libraries
import speech_recognition as sr
import os
from pydub import AudioSegment
from pydub.silence import split_on_silence

# create a speech recognition object
r = sr.Recognizer()

# a function that splits the audio file into chunks
# and applies speech recognition
def get_large_audio_transcription(path):
    """
    Splitting the large audio file into chunks
    and apply speech recognition on each of these chunks
    """
    # open the audio file using pydub
    sound = AudioSegment.from_wav(path)
    # split audio sound where silence is 700 miliseconds or more and get chunks
    chunks = split_on_silence(sound,
        # experiment with this value for your target audio file
        min_silence_len = 500,
        # adjust this per requirement
        silence_thresh = sound.dBFS-14,
        # keep the silence for 1 second, adjustable as well
        keep_silence=500,
    )
    folder_name = "audio-chunks"
    # create a directory to store the audio chunks
    if not os.path.isdir(folder_name):
        os.mkdir(folder_name)
    whole_text = ""
    # process each chunk
    for i, audio_chunk in enumerate(chunks, start=1):
        # export audio chunk and save it in
        # the `folder_name` directory.
        chunk_filename = os.path.join(folder_name, f"chunk{i}.wav")
        audio_chunk.export(chunk_filename, format="wav")
        # recognize the chunk
        with sr.AudioFile(chunk_filename) as source:
            audio_listened = r.record(source)
            # try converting it to text
            try:
                text = r.recognize_google(audio_listened)
            except sr.UnknownValueError as e:
                print("Error:", str(e))
            else:
                text = f"{text.capitalize()}. "
                print(chunk_filename, ":", text)
                whole_text += text
    # return the text for all chunks detected
    return whole_text
```

/home/shreyz-max/anaconda3/lib/python3.8/site-packages/pydub/utils.py:170: RuntimeWarning: Couldn't find ffmpeg or avconv - defaulting to ffmpeg, but may not work
warn("Couldn't find ffmpeg or avconv - defaulting to ffmpeg, but may not work", RuntimeWarning)

```
In [7]: path = "machine-learning-speech-recognition.wav"
print("\nFull text:", get_large_audio_transcription(path))

audio-chunks/chunk1.wav : His about which she had fixed a bug for country seat.
audio-chunks/chunk2.wav : Are short distance to the city.
audio-chunks/chunk3.wav : Just that what is now called dutch street.
audio-chunks/chunk4.wav : Should bounded with proofs of his ingenuity.
audio-chunks/chunk5.wav : And smoke jack.
audio-chunks/chunk6.wav : Required host version.
audio-chunks/chunk7.wav : Church of windsor was to meet without fire.
audio-chunks/chunk8.wav : Chords for the horses.
audio-chunks/chunk9.wav : Weather cox it turned against the wind and other one headed could try with this.
audio-chunks/chunk10.wav : Rustom stand confounded o b holders.

Full text: His about which she had fixed a bug for country seat. Are short distance to the city. Just that what is now called dutch street. Should bounded with proofs of his ingenuity. And smoke jack. Required host version. Church of windsor was to meet without fire. Chords for the horses. Weather cox it turned against the wind and o ther one headed could try with this. Rustom stand confounded o b holders.
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In [ ]:
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