

# Audio Processing Project

February 23, 2025

## 1 Assignment 3 Project 3

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[21]: #project: analyzing the text from a list of audio files that have words being spoken in them (not just environment sounds)

from scipy.io.wavfile import read
import speech_recognition as sr
import numpy as np

import pandas as pd
import requests
import re
from urllib.parse import urlparse
import urllib.robotparser
from bs4 import BeautifulSoup
from nltk import tokenize
import nltk
from nltk.sentiment.vader import SentimentIntensityAnalyzer
from collections import Counter
import string

# assigns value to the speech recognizer
r = sr.Recognizer()

#audio_file = ["SHREK-copy.wav"]
#audio = np.array([audio_file])
#print(audio)

result = ["data/first_speech.wav"]
for i in result:
    with sr.AudioFile(i) 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)
    #result.append(text)
```

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print(text)

#sentiment analysis
normalized_result = [word.lower().strip(string.punctuation) for word in text]
nltk.download('vader_lexicon')
sid = SentimentIntensityAnalyzer()
overall_text = " ".join(normalized_result)
overall_scores = sid.polarity_scores(overall_text)
print(overall_scores)

#CONCLUSION#
#for the list of audio data files provided, the reason that they are all 0.0
    ↪for neg neu and pos is because they are all simply
#statements, and they are so objective that they aren't even defined as neutral
    ↪because there is no sentimental or emotional
#tone to them. this gives insights into the factual and opinionated statements
    ↪we make and how they are less likely to
#offend or influence other people

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you're listening to data science 96 audio recording
{'neg': 0.0, 'neu': 0.0, 'pos': 0.0, 'compound': 0.0}

[nltk_data]  Downloading package vader_lexicon to
[nltk_data]      /home/sisrani/nltk_data...
[nltk_data]  Package vader_lexicon is already up-to-date!

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