**Speech Recognition Reading from the Microphone**

This requires PyAudio to be installed in your machine, here is the installation process depending on your operating system:

**Windows**

You can just pip install it:

pip3 install pyaudio

**Linux**

You need to first install the dependencies:

sudo apt-get install python-pyaudio python3-pyaudio

pip3 install pyaudio

**MacOS**

You need to first install portaudio, then you can just pip install it:

brew install portaudio

pip3 install pyaudio

Now let's use our microphone to convert our speech:

with sr.Microphone() as source:

# read the audio data from the default microphone

audio\_data = r.record(source, duration=5)

print("Recognizing...")

# convert speech to text

text = r.recognize\_google(audio\_data)

print(text)

This will hear from your microphone for 5 seconds and then tries to convert that speech into text !

It is pretty similar to the previous code, but we are using Microphone() object here to read the audio from the default microphone, and then we used duration parameter in record() function to stop reading after 5 seconds and then uploads the audio data to Google to get the output text.

You can also use offset parameter in record() function to start recording after offset seconds.

Also, you can recognize different languages by passing language parameter to recognize\_google() function. For instance, if you want to recognize spanish speech, you would use:

text = r.recognize\_google(audio\_data, language="es-ES")