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Speech recognition is the ability of a computer software to identify words and phrases in spoken language and convert them to human readable text.

Speech Recognition is the ability of a machine or program to identify words and phrases in spoken language and convert them to textual information.

You have probably seen it on Sci-fi, and personal assistants like Siri, Cortana, and Google Assistant, and other virtual assistants that interact with through voice.

These AI assistants in order to understand your voice they need to do speech recognition so as to understand what you have just said.

Speech Recognition is a complex process, well I'm not going to teach you how to train a Machine Learning/Deep Learning Model to that, instead, I instruct you how to do that using google speech recognition API.

As long as you have the basics of Python you can successfully complete this tutorial and build your own fully functioning speech recognition programs in Python.

In [12]:

```
!pipwin install pyaudio
```

Building cache. Hang on . . .

Done

Package `pyaudio` found in cache

Downloading package . . .

https://download.lfd.uci.edu/pythonlibs/y2rycu7g/PyAudio-0.2.11-cp38-cp38-win_amd64.whl (https://download.lfd.uci.edu/pythonlibs/y2rycu7g/PyAudio-0.2.11-cp38-cp38-win_amd64.whl)

PyAudio-0.2.11-cp38-cp38-win_amd64.whl

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\prathyu lachireddy\pipwin\pyaudio-0.2.11-cp38-cp38-win_amd64.whl
Installing collected packages: PyAudio
Successfully installed PyAudio-0.2.11
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```

In [10]:

`!pip install pipwin`

```

Collecting pipwin
  Downloading pipwin-0.5.1.tar.gz (8.8 kB)
Collecting docopt
  Downloading docopt-0.6.2.tar.gz (25 kB)
Requirement already satisfied: requests in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from pipwin) (2.24.0)
Collecting pyprind
  Downloading PyPrind-2.11.3-py2.py3-none-any.whl (8.4 kB)
Requirement already satisfied: six in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from pipwin) (1.15.0)
Requirement already satisfied: beautifulsoup4>=4.9.0 in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from pipwin) (4.9.3)
Collecting js2py
  Downloading Js2Py-0.71-py3-none-any.whl (1.0 MB)
Requirement already satisfied: packaging in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from pipwin) (20.4)
Collecting pySmartDL>=1.3.1
  Downloading pySmartDL-1.3.4-py3-none-any.whl (20 kB)
Requirement already satisfied: chardet<4,>=3.0.2 in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from requests->pipwin) (3.0.4)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from requests->pipwin) (2020.6.20)
Requirement already satisfied: urllib3!=1.25.0,!<1.25.1,<1.26,>=1.21.1 in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from requests->pipwin) (1.25.11)
Requirement already satisfied: idna<3,>=2.5 in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from requests->pipwin) (2.10)
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Collecting tzlocal>=1.2
  Downloading tzlocal-2.1-py2.py3-none-any.whl (16 kB)
Collecting pyjsparser>=2.5.1
  Downloading pyjsparser-2.7.1.tar.gz (24 kB)
Requirement already satisfied: pyparsing>=2.0.2 in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from packaging->pipwin) (2.4.7)
Requirement already satisfied: pytz in c:\users\prathyu lachireddy\anaconda3\lib\site-packages (from tzlocal>=1.2->js2py->pipwin) (2020.1)
Building wheels for collected packages: pipwin, docopt, pyjsparser
  Building wheel for pipwin (setup.py): started
  Building wheel for pipwin (setup.py): finished with status 'done'
  Created wheel for pipwin: filename=pipwin-0.5.1-py2.py3-none-any.whl size=8784 sha256=547335901beb2b771d2eb4c7017d07bbabe313832ddb4ddb80d846e0cfb09b66
  Stored in directory: c:\users\prathyu lachireddy\appdata\local\pip\cache\wheels\94\1b\63\6465d24b53c03f566cfb25a7a9b806b4b0e29c95d82ac189d8
  Building wheel for docopt (setup.py): started
  Building wheel for docopt (setup.py): finished with status 'done'
  Created wheel for docopt: filename=docopt-0.6.2-py2.py3-none-any.whl size=13709 sha256=291b0dd0e5a9afce860a75141e31d82ff3473da4d7a81133ed15749e7e5cd74f
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  Building wheel for pyjsparser (setup.py): started
  Building wheel for pyjsparser (setup.py): finished with status 'done'
  Created wheel for pyjsparser: filename=pyjsparser-2.7.1-py3-none-any.whl size=26004 sha256=76a1594bc2dc1a6f01b7d6a107744e58a593447edd80b303f2beb4a4f36e72d5

```

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Successfully built pipwin docopt pyjsparser
Installing collected packages: docopt, pyprind, tzlocal, pyjsparser, js2py, pySmartDL, pipwin
Successfully installed docopt-0.6.2 js2py-0.71 pipwin-0.5.1 pySmartDL-1.3.4 pyjsparser-2.7.1 pyprind-2.11.3 tzlocal-2.1

In [2]:

```
!pip install SpeechRecognition
```

Collecting SpeechRecognition

Downloading SpeechRecognition-3.8.1-py2.py3-none-any.whl (32.8 MB)

Installing collected packages: SpeechRecognition

Successfully installed SpeechRecognition-3.8.1

In [1]:

```
import speech_recognition as sr
```

In [2]:

```
import webbrowser
```

```
r= sr.Recognizer()
```

In []:

```
import speech_recognition as sr

r= sr.Recognizer()

with sr.Microphone() as source:
    print("What do want to search?")
    audio = r.listen(source)

try:
    txt = r.recognize_google(audio)
    print("You said:", txt)
except sr.UnknownValueError:
    print("I could not catch that")
except sr.RequestError as e:
    print("Could not request results; {}".format(e))
```

What do want to search?

In []:

In []:

