

## Assignment - 2

- ★ Problem Statement :- To study & explore IBM Watson speech to text & text to speech APIs
- ★ Objective :- To learn concept of text to speech & speech to text conversion in NLP.
- ★ Theory :-  
IBM Watson API :- the IBM Watson API services combine ML, NL, an integrated dialog editors to create conversation flow between your apps any cloud environment. Developer tools that make it easy to incorporate conversation language & ~~Base~~ Search into your application.
- Speech recognition :- It is technique or capability that enables a program or system to process human speech. It is also referred as voice recognition.

According to techopedia the use of computer h/w & s/w passed technique to identify & process the human voice. It is primarily used to convert spoken words into computer sent.

- Speech to text & text to speech:-  
With Watson text to speech, you can generate human like audio from written sent in provide the customer experience & engagement by interacting with users in multiple language & tones.  
Increase context accessibility for users with different abilities is like automated customer service interaction to increase efficiency.

### ★ Algorithm :-

- First set your microphone device using recognize ()
- Accept voice from the using mic.
- Remove Noise & distraction from the speech.
- convert the speech or voice to text.
- Now stores the text as string in a variable.
- Print the string.
- Split the string into 3 parts :-  
First Operand, operator & Second operand.
- convert the operand to integer.
- Finally do calculations.

★ Platform :- 64-bit open Source Linux  
IBM Watson cloud, json

★ Input :- voice speech - any audio  
Format file & text paragraph.

★ Output :- Audio file converted to text  
& text paragraph converted to audio



★ conclusion :- we learned the concept  
do Speech to text, text to speech  
Conversation in NLP.

★ FAQ'S

Q1) Which Python modules are used in speech recognition?

→ Python speech recognition module is

\$ sudo pip install speech & recognition.

Q2) List IBM Watson Module used for TTS  
STT

- IBM text to Speech
- IBM Speech to text.