# Report Voice assistant using Python

Content :



## Problem Statement :

### Made a voice assistance for Linux OS

**It can do the following tasks :**

1) **Open YouTube , chrome , gmail ,stackoverflow .**
2) **Predict weather in different cities**
3) **Check data on wikipedia**
4) **Get top headlines from TOI website**
5) **Can answer geographical and computational questions .**
6) **Greet the user**
7) **Capture images**
8) **Turn off your PC**
9) **Plays audio**
10) **Speak your name and tell its name also .**

## Methodology :

**Installed the desired packages in our system using the pip command.**

1) **Setting up the speech engine**
2) **Now define a function which converts text to speech.**
3) **Initiate a function to greet the user .**
4) **Setting up the command function for our voice assistant**
5) **Skill 1 -Fetching data from Wikipedia**
6) **Skill 2 -Accessing the Web Browsers — Google chrome , GMail and YouTube**

7) Skill 3 -Predicting time
8) Skill 4 -To fetch latest news
9) Skill 5 -Capturing photo
10) Skill 6 -Searching data from web
11) Skill 7 -Setting our voice assistant to answer geographical and computational questions
12) Skill 8 -To forecast weather
13) Skill 9 -To log off your PC

## Code Flow :

**Imported libraries like :**

**Speech_recognition,pyttsx3,datetime,wikipedia,os,subprocess,ecapture ,json , open weather API , wolframalpha**

**>Setting the speech engine , set the voice Id as 0 as 0 is for male and 1 for female .**
**> Defined speech function which converts text to speech using the pyttsx3 package and pyttsx3.init() function**
**> Then , defined Greet function which takes hours from date and time module using datetime.datetime.hour() function and greets the user according to that , like if hour is between 0 to 12 it will greet "Good morning" and so on**
**>Defined takecommand function which takes commands from the user in form, of human speech and performs desired task according to the command,if the functionality cannot be understood by opticron Then it says that it can understand the command and asks us to say the command.**
**>Used wikipedia.summary() function from wikipedia packages to extract data from wikipedia .**
**>We have used the open_new_tab function from the web browser package, accepts the URL and opens the URL which needs to be accessed .**
**>Then used ec.capture() function from the ecapture package,it captures images from the user camera .It uses robo camera**

**>Used Wolfram Alpha API to answer computational and geographical questions .**

**Log In to wolfram alpha website generated API key and use that to answer computational questions .**

**>Fetch news from the TOI website , using the open_new_Tab function from the webrowser package.**

**>Use OpenWeather API to extract weather conditions from your city name after asking your city.**

**>Use subprocess.call() to logoff the PC**

**>If we want to play any audio song then also our voice assistance makes the song available for us. Using webbrowser.open_new_tab() function.**

**>If we want details about our voice assistant then also give a response to our question like “who are you?” , “who made you?”, “what can you do?”**

**>Our voice assistance also gives details about date and time at current status. For this we have a datetime.datetime.now() function from the datetime library.**

**>If we want to turn off our voice assistance just say good bye or bye, it will turn off. Here we use the concept of breaking the loop.**

**We have used sleep() function to delay the execution of our voice assistance program.**

**Further we can add more functionalities to our voice assistance to perform more and more tasks as our requirement. We will welcome your suggestions.**

# Thank You