Sensor AI System

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Abstract:- Since last few years, the AI industry is booming like a hell, as we saw AI mainly in every gadget, appliances, vehicles, healthcare system, apps launched nowadays, and we will ready to see its influence permeate richer into many other industries and technology for the foreseeable succeeding. so, in future years AI will become like our daily needs. In my project Sensor AI System, which is working as desktop assistant or any other system according to our requirement the system takes user voice and perform task for the user, we have given several features like playing video on you tube and wishing users per the user date time and status, we have use python as an implementation language and vs code as a coding environment have install several modules that are OS, date time, pyttsx3. Our expected output was task performed by python-based program. We get desired output from code, we could also add sensor to fight with main loophole of the latest technology "ALEXA" in which we see voice command feature, Alexa work on our voices to complete the tasks given by the users with the help of python ,but the major problem is that if somebody does not have voice or unable to speak so he/she is unable to use this technology which now a day is seen everywhere whether its Alexa or MG Hector car assistant so by adding sensor like optical and motion gesture sensor to make the technology efficient for Deaf and voice enable people, because there is about 70 millions people who are voice disable its 5% of the world's population according to WHO and approx. 466 million people are hearing disable out of which 34 million are children's according to WHO so this are large numbers of people who can't use AI because of their disability by adding sensors and gesture we make them connect to the future growing AI Technology

Keywords:– WHO (World Health Organization).

I. INTRODUCTION

AI is based assistant is a python-based software that can send email without typing a single word, doing Wikipedia searches without opening it and perform many other daily tasks with the help of single voice command, everything which connect and belongs to technology. It's implemented by using many Machine Learning modules, like OS, Wikipedia, datetime, pyttsx3, speech recognition, browser, pywhatkit .Basically, program will take user input as voice and will give certain task result as the output. There are many functions that can be added in this but till now we added wishing the user according to date time. It will also search content on Wikipedia by taking the user input as the argument. We have used VS code as programming environment, for client server request we have installed OS module. AI assistant provided by company works mainly on voice command feature but 5% of World Population approx. ,70 million is voice disable (according to WHO) and 466 million have some form disabling hearing loss, so these are the huge numbers, so we should add some sensors like optical sensor, motion gesture sensors in AI Assistance.

II. LITERATURE

There are many Environments for AI. IEEE; USA defines AI in IEEE; USA [2017] as follows: "Artificial Intelligence (AI) is the theory and development of computer systems that are able to execute tasks that normally require human intelligence such as visual insight, speech recognition, learning, decision-making, and natural language processing". On the flip side, in their report for Stanford University, Stone et {2016} utilize the following: "Artificial Intelligence is that process devoted to making machines intelligent and smart, and reconnaissance is that quality that enables an entity to function appropriately and with foresight in its surrounding". Based on these, we grasp artificially intelligent systems as systems that modify to, have extensive knowledge of, or learn from their environment or application domain.

III. PROPOSED METHODOLOGY

In AI system we use sensors to make our AI system usable for everyone whether the person has any disability of voice, hearing disability language issue anything, firstly, we make our program on VS code with the help of python extension and python interpreter in vs code, which has extension like speech recognition date time etc. which works on our voice and perform task and by connecting the program with optical sensor, camera eye tracker it will take input from gesture, eye contact, emotion recognition as well and complete according to user input as result.
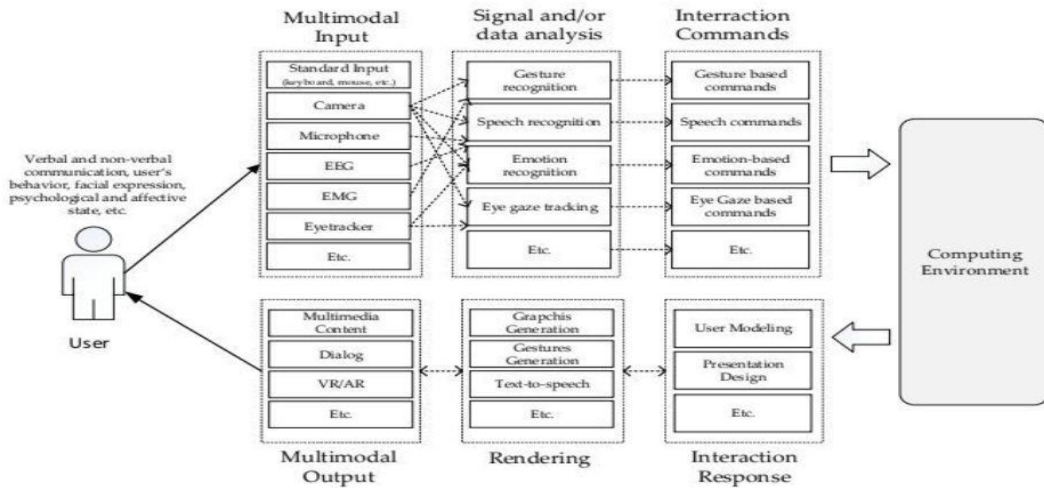
Figure 1. A general architecture of a multimodal HCII system (adapted from [6]).

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IV. IMPLEMENTATION

A. ENVIRONMENT

Visual Studio Code is a freeware source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

B. PACKAGES USED

- import pyttsx3
- import datetime # used for date time processing import speech recognition as sr
- import Wikipedia # Search command in Wikipedia import web browser
- import OS # inbuilt
- import pywhatkit as kit

C. TEXT TO VOICE FUNCTION

In this function we set the voice of our assistant whether its male or female voice, 0 fand 1 are to voices function, sapi5 is Microsoft voice function

```
SETTING THE VOICE

# selecting the voice of mybot

engine= pyttsx3.init('sapi5')
voices=engine.getProperty('voices')

engine.setProperty('voice',voices[0].id)
```

Fig. 2

D. SPEAK FUNCTION

In this function use for argument like if we give command to the assistant, it reply us with voice and result with the help with this function
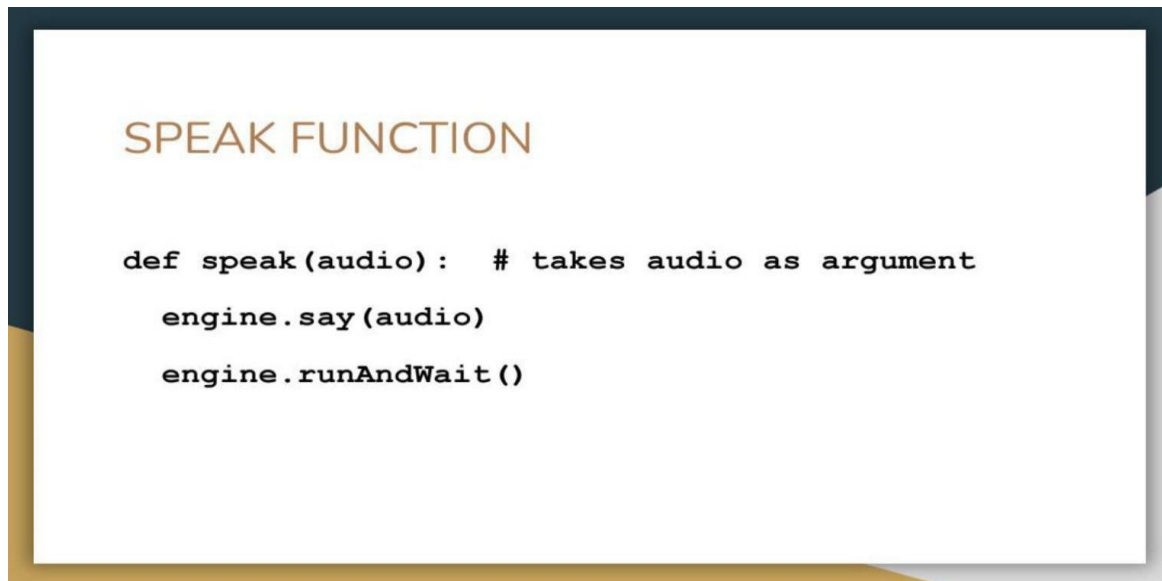
Fig. 3

E. TAKE COMMAND FUNCTION
This function help assistant to command and perform task for the user

Fig. 4

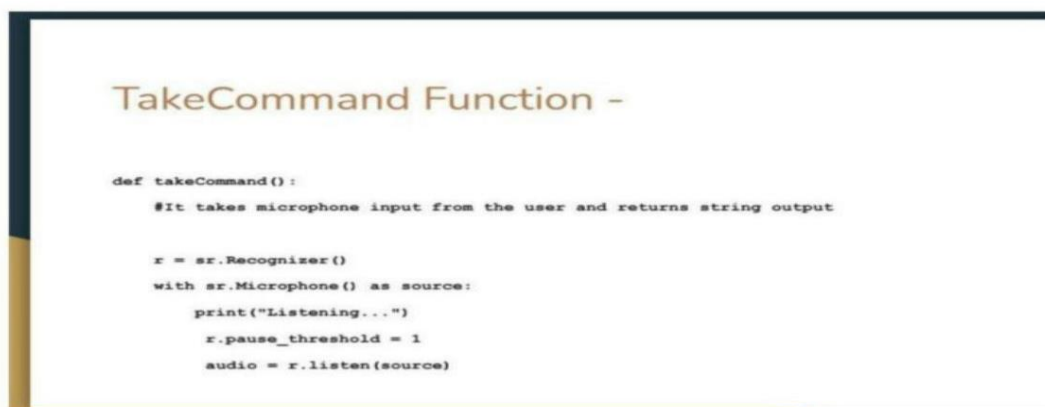### F. WISH FUNCTION
This function greets the user good morning, afternoon, or eve according to time, it's also remembered your birthday date and wish you according to date
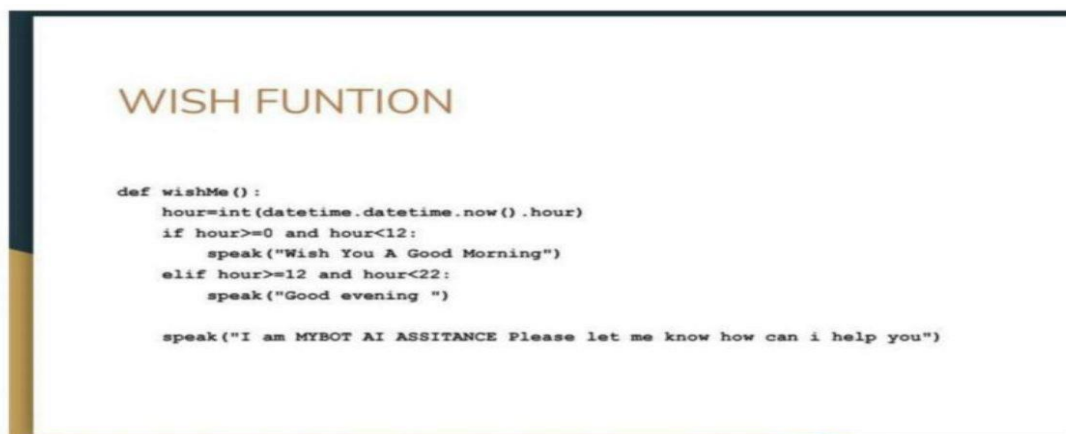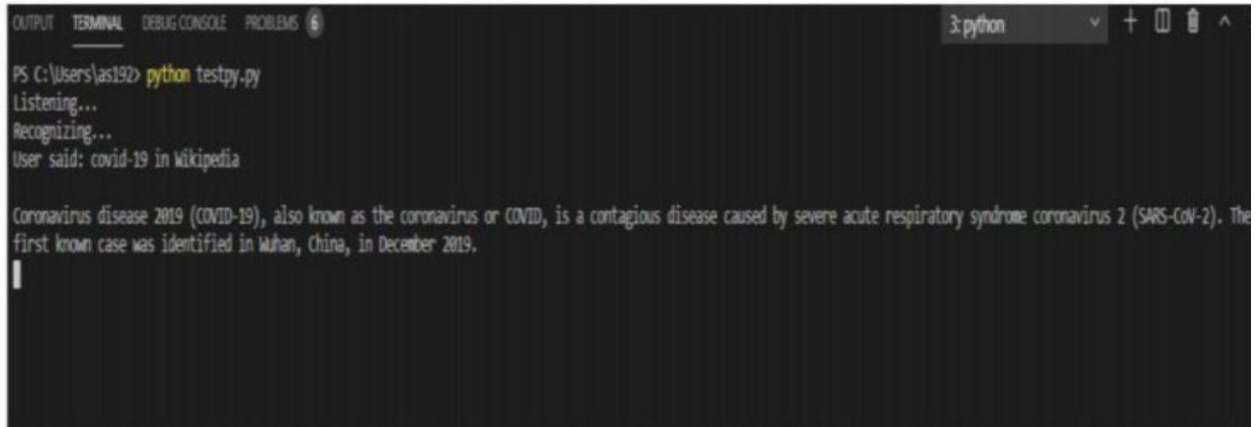

Fig. 5

V.   RESULT AND DISCUSSION

In this section we talk about after running the program and give input like search covid or anything you want with speech or optical sensor or gesture we get output as result. After doing writing code on vs code with the help of python as the interpreter language to perform our task given by the user

OUTPUT

Fig. 6

This is the desired output. After doing various step from downloading vs code, python to connecting sensor for this desired output.

VI.CONCLUSION AND FUTURE WORK

This is very useful for paradise person and deaf person who are unable to speak or lisen.it can also a very good change in cars for doing task verbally rather than manually, it will reduce the no. Of accident ratio. This system will make task very easy for human and reduce their work load and increase their efficiency by alerting them and doing various task which require time and attention but this system do all your minor stuffs by self if give and set the command you want according to your requirement future AI is game changing technology it will do all your digital stuff, it can also use in medical fields as well

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