Digital Employee using Capabilities of Artificial Intelligence to Human Intelligence

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ABSTRACT

Using the concept of Artificial Intelligence, a virtual assistant named "Gabriel" has been Developed to aid in education, market, business and many other fields.[4] The uniqueness of this bot is that it is programmed in python and is stored in raspberry pi providing the user friendly environment by moving along with user. It uses numerous python Libraries to help perform various functions that enable the Assistant to assist its user in day to Day activities. The Assistant can convert text to speech and vice versa using pyttsx3 and speech Recognition libraries respectively. Also, it can scrape the information from Wikipedia and visit any Website. It can be used to surf YouTube and visit any YouTube channel. The Assistant Comes with games such as flappy bird, tic-tac-toe and snake developed by the programmer. Also, the Assistant has an in-built calculator that too developed by the programmer. This Research is to develop an assistant who is highly compatible with human life. This employee comes with a self-made library called 'the_gmail_sender' that sends Gmail taking Voice input from the user.

Keywords : Python, Artificial intelligence, the Gmail sender, Internet of things

I. INTRODUCTION

A virtual assistant or virtual employee assistant is an application that takes natural language voice as input commands to perform tasks for users. It takes voice input, process it and hence cane gives output according to the input. The virtual Assistant is based on python and uses emerging technologies like voice recognition and AI. These kinds of the virtual employee are often used in Amazon called as **ALEXA,** in Google it is called **GOOGLE ASSISTANT**, in Microsoft, it is called **CORTANA** and in Apple, it is called **SIRI.**

Virtual Assistant is a real-time and interactive technology. Unlike other assistants, it can also make the different sort of list like a shopping list, idealist etc. On anyone's voice command, it can perform numerous tasks like play music, open any website, open YouTube, surf YouTube, open some user-designed games, open any sort of pre-saved file from your desktop can send Gmail and much more.
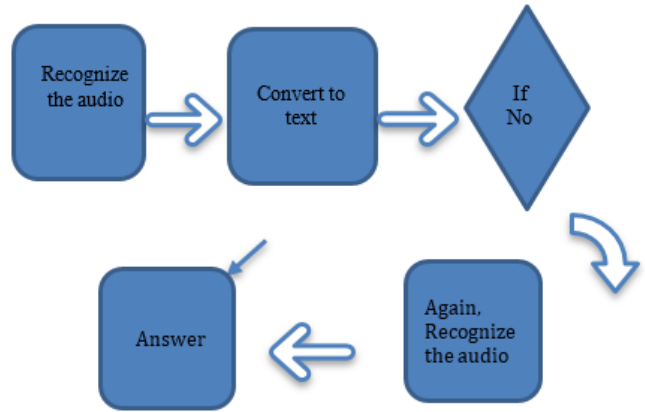
II. LITERATURE SURVEY

Virtual Assistant is actually a voice assistant. The majorly known virtual assistants are:

1.   Google Assistant
2.   Alexa
3.   Cortana
4.   Siri

Talking about Google's Assistant because it is self-sufficient and covers almost every spectrum of assistance so just talking of it in order to save our time.[2]

Google Assistant offers voice commands, voice searching, and voice-activated device control, letting you complete a number of tasks after you've said the "OK Google" or "Hey, Google" wake words. It is designed to give you conversational interactions. The Assistant can control your devices and your smartphone via voice. It can access your personal information such as contact numbers, calendar dates, events, bookings, etc. it can read the weather for you and tell you if your route is jammed from an accident. Also, it can set alarms and remainders using simple voice commands. It can run timers, send messages, record your voice and even sing for you. All in all, the google voice assistant is the PA that every boss dream's of.

III. IMPLEMENTATION

Figure 1: Working of Ccommands

This Assistant uses few hardware devices in addition to python 3.

That hardware devices are:
1. USB Mic

2. Speaker (aux type)
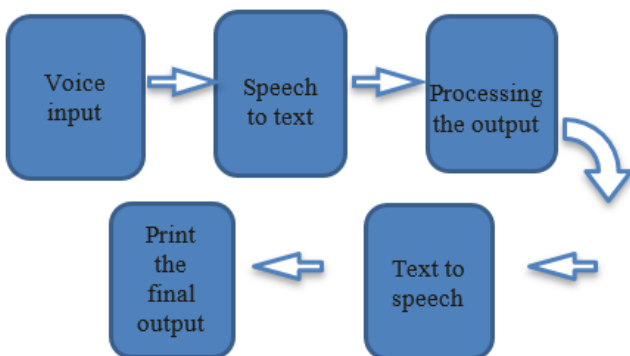

3. Internet connection (constant and stable)

The specialty and uniqueness of this Assistant are that it is loaded in physical hardware called **Raspberry pi**. [3]

Along with pi, it is containing some more hardware devices such as **ARDUINO,** fire sensor, smoke sensor, buzzer, ultrasonic sensor etc. Which made this mobile and more interactive.

The uniqueness of it is that by sensing the colour it can start or stop moving and it can move along with the user.

With all these features it comes with a smoke sensor which can sense smoke within 3 meters and can inform by alarm and after the alarm, it will find a way to exit in order to protect itself.
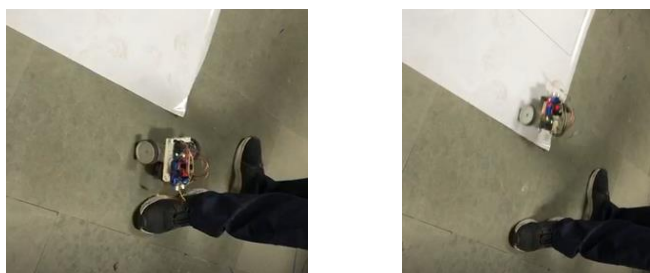
In the software part, a self-sufficient and only language python 3.x developed by **GUIDO VAN ROSSOM** is used.

Numerous Python libraries are used to make this Assistant a possible task. A list of these are:

1. PYTTSX3: For text to speech
2. SPEECH_RECOGNITION: for the conversion of speech to text
3. WEBBROWSER: for visiting any web page
4. WIKIPEDIA: for scraping the information from Wikipedia
5. RANDOM: for generating the random values to perform a specific task
6. PLAYSOUND: for playing saved audio files

7. DATETIME: for reading the date and time from the system

This Assistant also comes with some games designed by the programmer: [1]

1. Tic-tac-too: a game made in simple python GUI
2. Flappy birds: a game made with the use of python turtle without the use of GUI
3. Hungry Snake: a game made with perfect GUI and an attempt to revive the legendary snake game of Nokia.

IV. RESULT

INPUT	OUTPUT
Voice input by the user	printed as well as speech output
Open command	Opens any website Example open youtube
Play command	Plays song and games As per users request
Evaluate command	Calculates using wolfram alpha
Send an email	Sends email using SMTPLIB
Any command except this	**WIKIPEDIA** search
IF WIKIPEDIA doesn't exist	**Google** searches for the requested query.

V. FUTURE SCOPE

Using Machine Learning and Artificial Intelligence it is intended to make a personal assistant. After talking to a person for 3-4 days it will save the curriculum and make automatic reminders for the tasks that are performed daily.[2]

It will be loader by facial recognition in such an advanced manner that it will also be able to recognise the facial expression that is what is the current mood of the user.[4]

Face lock for more than one person so that to keep the data safe and easy access to family or friends.[4]

Some other biometrics such as fingerprint scanner can also be attached with it.

Since we are working on raspberry pi so pulse monitoring and blood sugar monitoring sensors will also be used.

we can use alcohol detecting sensor to ensure that the user is not victim of any sort of alcohol abuse.

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