International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 09 Issue: 05 | May 2022 www.irjet.net p-ISSN: 2395-0072

A Review on Personal Digital Voice Assistant

Kirti Jain[1], Aaqib Ahmad Malik[2], Abhilash Singh[3], Abhinav Kumar[4], Abhishek Singh[5]

Department of Computer Science and Engineering, IPEC, Ghaziabad

---

Abstract - *Personal Digital Voice Assistant is considered as a platform to perform the daily task of the user. Personal digital voice assistant is an assistant program that works on the desktop. This digital assistant listens to the user's voice and responds to the verbal commands. Personal digital voice assistant aimed to provide the hands free experience to the user. In this paper, we focus on the development of the personal voice assistant and also how the google assistant will execute its task. Our focus is to provide the hands free experience to the user . Entire assistant is designed using python.*

1. INTRODUCTION

Personal digital Voice Assistant aimed to provide a hands free experience to the user as much as possible. And this virtual voice assistant is capable to open different sites, can also open different applications, send mail on the single voice command and also be able to play music on the single user voice command.

Based on unique commands, on occasion referred to as intents, spoken by the user, voice assistants can return applicable facts by means of listening for particular keywords and filtering out the ambient noise.

Whilst voice assistants can be completely software based totally and capable of combine into maximum gadgets, some assistants are designed specially for unmarried device programs, along with the amazon alexa wall clock.

Nowadays, voice assistants are included into a number of the devices we use on a each day foundation, which includes mobile telephones, computers, and smart speakers. Due to their big range of integrations, there are numerous voice assistants who provide a very specific function set, while a few select to be open ended to help with almost any state of affairs to hand.

2. SCOPE

The number of searches using devices without screens will reach 30% by 2020. Increasing numbers of people are virtual assistants. AI Voice Assistant can perform simple tasks such as: Sending emails, performing Wikipedia Searches.

The ability of voice assistants to differentiate between voices will allow them to offer more personalized experiences in the future. However, it's not just developers who must deal with the complexity of voice developments, brands must also understand the capabilities of each device and integration, and if it makes sense for their particular brand. Within the coming years, the user experience must also be consistent as difficulty becomes more of a concern. Currently, there is no desktop voice assistant. There is simply no way for users to see or interact with voice interfaces.

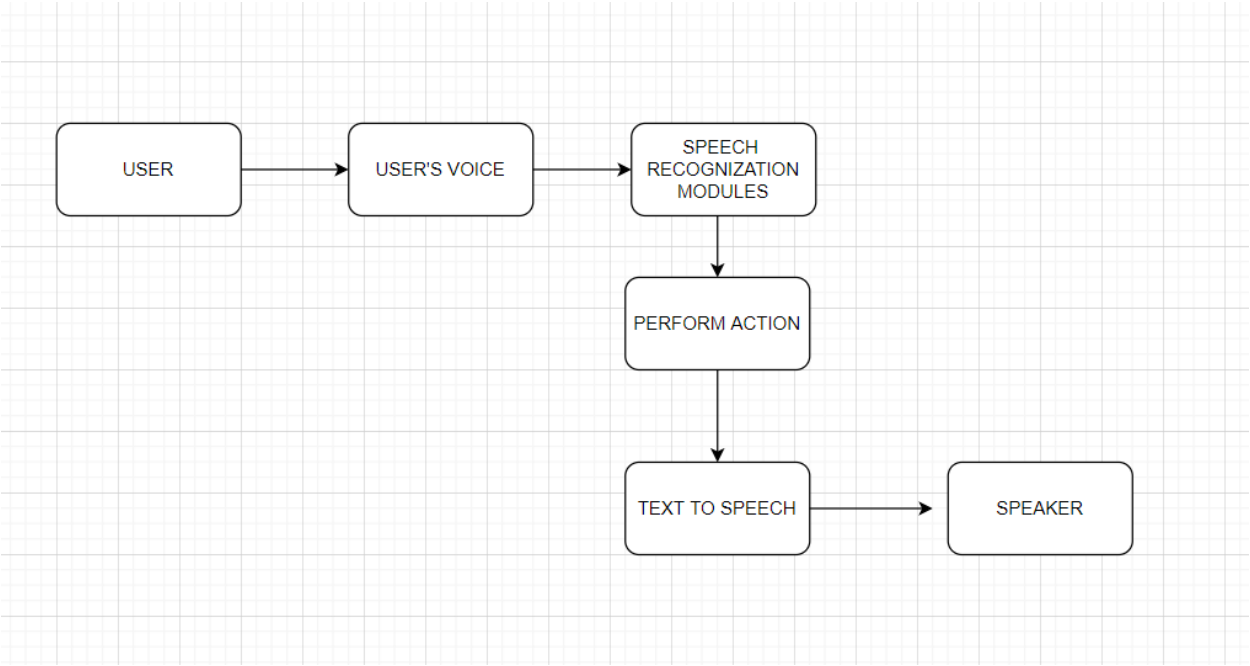
3. OBJECTIVE

Objective is to develop a virtual assistant that can perform user's at single user's voice command. Some of the tasks are as follows:

- You can use it to send emails.
- You can play music using this virtual assistant.
- You can use it to search wikipedia.
- A web browser can open websites such as Google, YouTube, etc.
- With a single voice command, you can open your code editor or ID

4. APPROACH

The diagram to show the working of the digital voice assistant is shown below:



1. USER: User is the person who is using the Digital voice assistant currently. The assistant should be assistant i=on the user's desktop/pc.

2. SPEECH RECOGNITION: Speech is taken by the assistant as an input with the help of the microphone that may be inbuilt or external microphone. Than the assistant recognize the with the help of the different modules.

3. PERFORM ACTION: Action is performed by the assistant of the basis of the user command and the assistant checks whether she can perform the action or not.

4. TEXT TO SPEECH: Text to speech is done by the assistant with the help of modules. And the assistant gives the Output with the help of the speaker.

5. LITERATURE REVIEW

SrNo	Name	Year	Review
1	"A Review on Voice Assistance using Python " [1]	2020	As a first step toward evaluating the potential role of remote aid in programming improvement projects completed by virtual teams, this study has been conducted. Users with visual impairments and physical challenges will benefit from this work. Rather than a unified marketplace, we will see fragmentation. Based on the hardware purchase, you might have the option of using default AI providers. In this case, there will be friction for consumers, and third parties will be required to replace incumbents.
2	"AI Based Voice Assistant Using Python" [2]	2019	The possibility of introduced capability required in making the assistant more accurate and fast while the interplay with the consumer. This mission may be in addition progressed with the aid of implementing the voice command in google seek queries. Better speech reputation so that the consumer can get prompt output and packages such as locking computer or starting computer on the instructions of the person. In coming days our proposed device may be applied in multilingual software so

			that someone can use the application of their personal language without any trouble.
3	"The Voice Enabled Personal Assistant for Pc using Python" [3]	2021	This paper provides a comprehensive evaluation of the design and development of a voice enabled personal assistant for pc the usage of python programming language. This voice enabled non-public assistant, in contemporary life fashion may be extra effective in case of saving time, compared to that of preceding days. This personal assistant has been designed easily of use as the principle characteristic. The assistant works well to perform a few duties given through consumer. Moreover, there are numerous things that this assistant is capable of doing, like turning our laptop off, or restarting it, or reciting a few ultra-modern news, with just one voice command.
4	"Smart Voice Based Virtual Personal assistants with Artificial Intelligence" [4]	2020	The private voice assistant gadget provided on this paper may be very fundamental machine with few capabilities however the additional and improve feature may be introduced as destiny work of this venture , on this paper the layout and implementation of a wise private voice assistance is defined.
5	""Artificial Intelligence-based Virtual Assistant" [5]	2021	The possibility of added functionality required in making the assistant extra correct and fast while the interaction with the person. This mission may be further advanced by way of imposing the voice command in google seek queries. Better speech recognition so that the user can get spark off output and packages which include locking computer or opening computer on the instructions of the user.
6	"Desktop Voice Assistant Using Natural Language Processing (NLP)" [6]	2020	In this study, we have developed a voice assistant which can perform any kind of task in exchange of commands given by the users without any error.

6. FUTURE SCOPE

The consumer spending on the voice assistant in 2022 is projected to 18%. And without any surprise by 2022, the voice based assistant is expected to have the revenue to reach $ 19 billion. This shows the increase in the use of the voice searches made on the devices.

And there is also the possibility of upgradation in our Virtual Digital Assistant. As now it is program based without any GUI and Application.

But in the future as an upgrade we can build a Graphical User Interface for the Virtual Desktop Voice Assistant.

7. CONCLUSION

User interfaces have gotten increasingly natural to use over the course of computer history. One stride in this approach was the screen and keyboard. Another was the mouse and graphical user interface. The most recent advancement is touch displays. Augmented reality, gestures, and voice controls will most likely be used in the following level. After all, asking a question or having a chat is frequently more convenient than typing something or filling out a lengthy online form.

The more a person uses voice-activated devices, the more trends and patterns the system detects based on the data it gets. The data may then be used to establish consumer preferences and tastes, which is a long-term selling point for smart home technology. Google and Amazon want to combine voice-activated artificial intelligence that can analyze and respond to human emotion.

8. REFERENCES

[1] "A Review on Voice Assistance using Python ".published by International Research Journal of Engineering and Technology (IRJET) Issue on: 09 | Sep 2020 paper contain 07 volumes.

[2] "AI Based Voice Assistant Using Python", by International Journal of Emerging Technologies and Innovative Research (www.jetir.org | UGC and issn Approved), ISSN:2349-5162, Vol.6, page no. pp506-509, , Issue 2 February-2019.

[3] "The Voice Enabled Personal Assistant for Pc using Python" by International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249-8958, Volume-10 Issue-4, April 2021

[4] "Smart Voice Based Virtual Personal Assistants with Artificial Intelligence" by Artificial & Computational Intelligence / Published Online : June 2020 https://acors.org/ijacoi/VOL1_ISSUE3_18.pdf

[5] "Artificial Intelligence-based Virtual Assistant" by International Journal of Computer Science & Wireless Security (IJCSWS) Vol. 08(02), Mar-Apr 2021,pp.39-43

[6] "Desktop Voice Assistant Using Natural Language Processing (NLP)" by International Journal for Modern Trends in Science and Technology, 6(12): 332-335, 2020