Application of Laptop Assistant

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Abstract- *This report discusses ways in which new technology could be harnessed to create an intelligent Virtual Personal Assistant (VPA) with a focus on userbased data. It will look at examples of intelligent programs with natural language processing that are currently available, with different categories of support, and examine the potential usefulness of one specific piece of software as a VPA. This engages the ability to communicate socially through natural language processing,holding and analysing data within the context of the user. It is suggested that new technologies may soon make the idea of virtual personal assistants a reality. Experiments conducted on this system, combined with user testing, have provided evidence that a basic program with natural language processing algorithms in the form of a VPA, with basic natural language processing and the ability to function without the need for other type of human input (or programming) may already be viable.*

I. INTRODUCTION

A virtual assistant is a technology based on artificial intelligence. The software uses a device's microphone to receive voice requests while the voice output takes place at the speaker. But the most exciting thing happens between these two actions. 2 It is a combination of several different technologies: voice recognition, voice analysis and language processing. 3 When a user asks a personal assistant to perform a task, the natural language audio signal is converted into digital data that can be analyzed by the software. Then this data is compared with a database of the software using an innovative algorithm to find a suitable answer. This database is located on distributed servers in cloud networks. For this reason, most personal assistants cannot work without a reliable Internet connection.

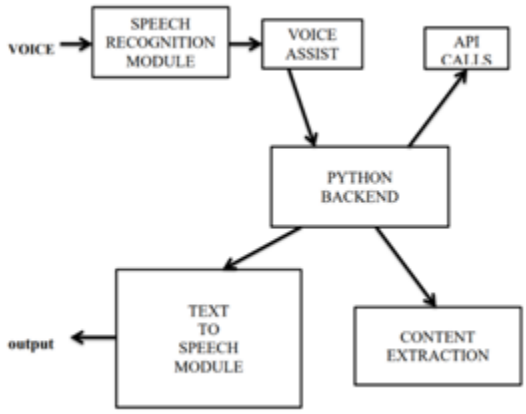
II. IDENTIFY, RESEARCH AND COLLECTIDEA

A voice assistant is a digital assistant that uses voice recognition, language processing algorithms, and voice synthesis to listen to specific voice commands and return relevant information or perform specific functions as requested by the user.Based on specific commands, sometimes called intents, spoken by the user, voice assistants can return relevant information by listening for specific keywords and filtering out the ambient noise.

III. METHODOLOGY

Building a virtual assistant in Python can range from relatively easy to incredibly complex, based on how sophisticated you want the functionality.

1: Install the relevant modules and libraries.
2: Import the modules and libraries.



IV. LITERATURE SURVEY

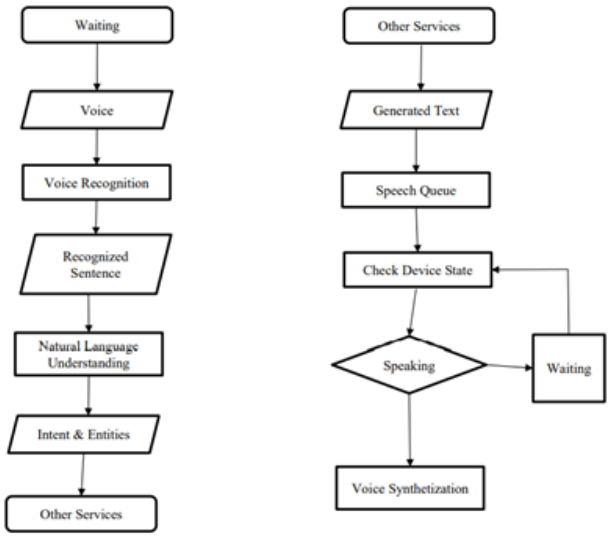
A computer primarily based approach for performing a command via a voice consumer interface on a subset of objects. The subset is selected from a fixed of items, each having an object type at least one taggable field is associated with the object type and has a corresponding value. The set of objects is saved in the laptop memory. An utterance is acquired from the person and consists of a command, an object type choice. a tag-gable field selection, and a price for the taggable discipline. Responsive to the utterance, at least one item is retrieved from the set of gadgets, the item of the sort selected through the user and having a price within the taggible area selection that matches the taggable field fee obtained from the user the command is done on the item. The object includes textual content that's converted to voice output. They envi sioned that someday computers will

recognize natural language and count on what we need, whilst and where we need it, and proactively whole responsibilities on our behalf. However, speech recognition and machine getting to know have persevered to be refined, and based records served through packages and content providers have emerged. We agree with that as computer systems turn out to be smaller and greater ubiquitous [e.g., wearables and Internet of Things (IoT). The recognizer is designed to change a verbal articulation from a individual into an alternate method of data (e.g., text). A hand-held individual colleague including a voice-recognizer and a characteristic dialect processor is disclosed. This snippet of data can be a plan for the day, data in the individual's logbook or data from the individual's address book. Such as a telephone number.

V. EXISTING SYSTEM

These days people need not to do anything everything is automated and everyone needs automation.In this automated world we need a voice assistant. It can command through voice and we don't need to do anything physically.

VI. STRUCTURE



The technology of Chinese speech recognition has been well developed by iFLYTEK, so we integrated it into the platform to get the raw natural Chinese sentence from users' voice. However, the dictionary of voice recognition needs to be extended because the customized words such as names in contacts are also needed to be recognized to support the services of accessibility. For example, a wrong homophonic name can't be searched out from the contact database. To solve this problem, we locally extended the dictionary of the voice recognition module according to limited user data to get a better accuracy.

Another important problem need to be solved is to understand the intent of visually impaired users and get the key information from the expression parsed from the human voice. To classify the intent of user from commands, this study trained a model based on the LUIS with well accuracy and stability to understand natural language. For example, if user speak "I want to walk to Beijing University of Posts and Telecommunications", the model can parse this command to an intent "Navigation" and entities of "Beijing University of Posts and Telecommunications" with the type "Location" as well as the transport entity "Walking". With the intent and entities, the navigation service can search and plan the route for this query in order to navigate user to the certain place.

VII. ADVANTAGES

- Hands-free Functionality
- Variety of Skills
- More Free Time
- Help With Your Distress

VIII. DISADVANTAGES

- Signal Strength
- Voice is Essential

IX. CONCLUSION

While digital voice assistants have their limitations, you can't deny that they enhance convenience and comfort in a smart home. With more updates lined up for voice assistants, the future of home automation is in good hands.

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