

Assist Me (Voice Assistant)

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Abstract - Advances made with recent technologies have boosted the development of Systems to assist the daily lives of the visually impaired people. Assisting visually impaired people in daily life activities is very important to improve their quality of life. As we all know that technology evolved rapidly in the last few decades and with the help of technology, we can do things which we have never thought before but for this purpose we need a platform which is capable of doing our tasks easily. Here arises the need to develop a Personal Assistant which have enormous power and ability to interact with its environment and human beings.i.e. HUMAN VOICE. The goal of this android application helps visually impaired people (VIP) with their daily life of mobile usage. The four major modules in the application are: Visiting Card Scanner, Twitter Tweets Reader, Image Reader and Finding Info from Wikipedia. The application enables the user to scan a Visiting card and creates a contact for the user. Twitter Tweets Reader helps enables the user to listen to the tweets made by the people across the twitter network. The Image Reader helps the user in scanning an image and listening to the data extracted from the image. The Finding Info from Wikipedia feature helps the user by providing a basic insight on unknown information that the user wants to know.

Index Terms - Artificial intelligence, Human factors, Mobile Device, Virtual Personal Assistant.

I.INTRODUCTION

The proposed model includes implementation of an intelligent voice recognition assistant for Android systems where the functions of currently existing applications on some other platforms is compared. Until this day, there has not been any good alternative for Android, so this project aims to implement a voice assistant for the Android platform while describing the difficulties and challenges that lies in this task. Basically, This project is based on Android application development and provide personal assistant using voice recognition or text mode operation. Calling services, text message transformation, mail exchange,

alarm, event handler, location services, music player service, checking weather, Google searching engine, Wikipedia are some of the examples whose functions and services will be checked by this proposed model, searching engine, robot chat, camera, Bluetooth headset support. Not only to different generations and occupations but this application can be applied to many real-world industries also. It will prove very useful for disabled community, personal assistant, and direction guiding purposes and many more. This project is based on Android application development and provide personal assistant using voice recognition or text mode operation. This program includes the functions and services of calling services, text message transformation, mail exchange, alarm, event handler, location services, music player service, checking weather, Google searching engine, Wikipedia searching engine, robot chat, camera, Bluetooth headset support. Why would we need it? Because your own voice is turning into a best input device than a conventional enter key. The architecture of basic Voice Controlled Personal Assistant Device is shown in fig 1.



Fig 1. Basic architecture of Voice Controlled Personal Assistant

II. VOICE RECOGNITION

This system works with the help of Google server. The process involves the conversion of speech signal into set of words and this function is performed by a software component. Accuracy of this model depends on vocabulary size and confusability, modality of

speech (isolated, discontinuous, or continuous speech, read or spontaneous speech), task and language constraints. The system consists of five modules: feature extraction, phone model training, dictionary preparation, grammar estimation, and sentence decoding. System converts normal language text into speech and also the output is given in the form of speech.

III. VOICE INPUT MANAGER

It manages the command given by user. The input given by user is sent to database manager. The work of database manager is to ensure that the input given by the user matches with the vocabulary of words that it have and sends the response to the action performer whose work is to decide which actions should be performed as per the given command.

IV. LITERATURE REVIEW

There have been a huge amount of innovation and advancement in this field of speech recognition based virtual assistants. This is mainly because of its demand in devices like smart watches or fitness bands, speakers, Bluetooth earphones, mobile phones, laptop or desktop, television, etc. Almost all the digital devices which are coming nowadays are coming with voice assistants which help to control the device with speech recognition only. With the use of voice assistants, we can automate the task easily, just give the input to the machine in the speech form and all the tasks will be done by it from converting your speech into text form to taking out keywords from that text and execute the query to give results to the user. The most benefit of this model will be for disabled people especially for visually impaired ones. Using google text to speech, the audio speech is prepared using pre and post processing, using optical characters recognition to recognise the plane text before transforming it into speech. The most benefit of this model will be for disabled people especially for visually impaired ones. Using google text to speech, the audio speech is prepared using pre and post processing, using optical characters recognition to recognise the plane text before transforming it into speech. In the present day scenario, people use google for various kinds of day to day activities such as news, weather forecasts, online studying and many more. The major objections is to help the visually impaired

people by the virtue of this project. Simply by taking voice commands, personal assistant and hoke automation can be achieved.

V. INFERENCES DRAWN FROM LITERATURE

There exists two modes in the program for better execution of the functions and services. Initially, the program will execute in the voice mode as its primary mode, but as per the need, user is free to switch to the the text mode in case he/she is facing any difficulties using he voice mode or if there pursue some problems because of which they can not support the voice recognition properly. 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 tag able 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 tag able 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 tag able area selection that matches the tag able field fee obtained from the user the command is done on the item. The Intelligent Personal Assistant software is an application that has been designed to assist people with basic tasks using an inbuilt natural language user interface. Intelligent personal assistants help answer and respond to queries based on the data that the user inputs into it. They are robots that help solve problems in real-time which enhances human capability and productivity. With the advances in mobile telephony nowadays, as well as the improved capabilities of mobile devices, more and more services are provided in a mobile manner, making this way the Nowadays, carrying smart gadgets such as tablets or smartphones is like a necessity for all of us in this technology based world. Voice assistants are capable enough to recognize input in various means and process the output in the corresponding manner. Some of such input modes are speech recognition, gesture recognition. These VA's can be used in enhancement of user experience in different fields like education assistance, home automation, security control etc. Voice assistants have changed the way people interact with mobile phones

or other electronic devices. Multiple assistants have been developed with best features like Google, Siri, Alexa but the choice of VAs differs with people. Survey has been conducted to determine the factor on which the choice of people for VAs depends.

VI. CONCLUSION

Voice Controlled Personal Assistant System is an implementation of an intelligent voice recognition assistant for Android where functionality on current existing applications on other platforms is compared. The aim of this project is to make a voice assistant for android platforms also as there has not been any good alternative for android. It will use the Natural language processing and can be integrated with artificial intelligence techniques to achieve a smart assistant that can control IoT applications and even solve user queries using web searches. By achieving this, human life will become more comfortable as it is designed to interact with other subsystems and control the devices. There can be a feature to add personal data to it also. The software will facilitate ease of access to various other devices and platforms. Many tasks that are performed manually can be handled by this system by coordinating with other subsystem and hence making the human work less and increasing the level of comfort. ASSIST ME is Designed to help Native and especially for Blind persons which works on their Voice Commands. ASSIST ME also has the capability of recognizing the voice commands without internet connection. ASSIST ME has various functionalities of mobile devices like network connection and managing various applications on just the voice commands. Some of the key features of this system are voice pattern recognition, pattern detection, keywords learning and many more. These features make it easier for the user to use this model and its functionalities. Hence, ASSIST ME is language barrier independent which actively responds to user's voice commands faster than the Online Voice Search applications.

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