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Voice In Buzz-The Voice Assistant Developed In Android

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ABSTRACT

Buzz in voice is an Android application who listen the voice of humans and do the work accordingly. It is a voice recognition software program with ability to decode the human voice. A voice command device is device controlled by means of human voice. By removing the use of buttons, switches and dials, consumer can easily operate their appliances. The idea that a person is able to speak into a microphone attached to a computing device and have those words typed out used to be the stuff of science fiction. It however, is now reality. The technology is being used to replace other methods of input like typing, clicking or selecting in other ways. It is a means to make devices and software more user-friendly and to increase productivity.

Keywords: Voice Assistant, Voice Command.

I. INTRODUCTION

In the last two decades, attempts have been made to automate the recognition of human speech. The term "Speech Recognition" is one that covers many different approaches to the problem of recognizing human speech. It ranges from isolated word recognition to continuous speech recognition, from speaker-dependent recognition to speaker-independent recognition, and from a small vocabulary to a large vocabulary. The simplest scenario is speaker-dependent, isolated word recognition on a small vocabulary and the most complex is speaker-independent, continuous speech recognition on a large vocabulary. In any case, the speech recognition problem, as developed over the years, is a highly computation intensive problem; it requires fast processors, and a large amount of memory.

Many attempts have, therefore, been made to speed up the process by using various techniques. Certain smart phones are making interesting use of speech recognition. The iPhone and Android devices are examples. Through them, you can connect a call from contact by just spoken instructions like 'Call xyz'.

The new modern era goes in technology will require human beings and human voices to become one with the technologies they create and the ability to operate in real-time. The main step towards this goal is Voice Recognition Technology in which the humans can talk and communicate in a way that is common to them through their evolutionary process - vocal and speech. So that, they are able to operate with the tools they have created.

Voice recognition recognizes the queries, phases and vocals and converts them to a machine-readable form. By converting spoken vocal audio into text, speech recognition technology let users to control devices by speaking instead of using conventional tools such as hand keys, buttons, keyboards etc. Speech Recognition which is also called as automatic speech recognition (ASR)

II. OBJECTIVE

- ✓ This project is designed to provide feasibility to the user, providing voice- command authentication to access various apps and to make a call.
- ✓ This project examines known speech recognition techniques.
- ✓ Thus, the aim of this thesis is to develop a speaker independent, isolated word, limited vocabulary speech recognition system that is small enough to fit in a small household appliance and can be operated in real time.
- ✓ To give the command to the application like:-
- ✓ Calling a person from contact list.
- ✓ Opening and closing of flash light of mobile.
- ✓ To open any other application from mobile.

III. METHELOGY

The major steps in producing speech from text are as follows:

Dict

File path of the dictionary file that contains all the words that the engine can recognize and operate.

folder

Path of the folder where *.vq are located after that we have to make the object of mic input class by using the following method.

micInput():

The Constructor used to create micInput object. After then by using the following method we can recognize the spoken words.

byteArrayComplete():

This method return true if a word is present and store in the buffer.

removeOldWord():

This method remove the element in the buffer.

newWord():

This method read the next element in the word buffer.

run():

Start recording from the microphone of device.

stopRecord():

Stop the recording of device.

setContinuous():

set the recording method to continuous.

Structure analysis: This is the process in which the input text to determine where sentences, content paragraph and other structures start and end. For most languages, formatting data and punctuating are used in this stage.

Text pre-processing:. In English, special treatment is required for email address, times, currency amount, acronyms, numbers, dates, abbreviation and many other forms. Other languages need special processing for these forms and most languages have other specialized requirements. Analyzing the input text for further constructs of the language.

Structure analysis:

- Structured analysis (SA) and structured design (SD) are very important in software engineering; It is a methods for analyzing developing specification and business requirements for converting thinking into computer programs and software, hardware configurations, and related manual procedures.
- Structured analysis and structured design typically creates a order of employing a single conceptual structure.
- The structured analysis procedure can employ process manage, and starts with a purpose and a viewpoint. This method identifies the overall function and iteratively divides functions into smaller functions, take care controls, input, output, and structure necessary to optimize processes.
- It control system structure in the form of required functions and functional decay of the structured method describes the process without outline system behavior.

Text to phone analysis:

This algorithm is used to convert the text into phone language, in which the device internally operates.

Prosody analysis:

- Prosody is related with those elements of speech that are not separate and independent phonetic part (vowels and consonants) but are properties of syllable and larger units of speech.
- Prosody analysis is related to the larger units of speech and grammar of syllable and word.
- Prosody analysis mainly are not related to phone segments and speech that are not related to phonetic.

IV. OBJECTIVE IN DETAILS

This project is designed to provide feasibility to the user, providing voice- command authentication to access various apps and to make a call. The underlying features of this app saves time of the user and makes easy and rapid access to the other application of the same program using voice command. Internet is not mandatory for the use of app, once the app is installed.

V. PROCEDURE

- ✓ Open the app buzz in voice, that is already installed in your mobile system
- ✓ Click on – ON button.
- ✓ To activate the app, voice command "okay voice" is given.
- ✓ Give the voice command for the application you want to open/close.
- ✓ For closing the application, click on OFF button.

VI. FLOWCHART OF OPERATION OF APPLICATION

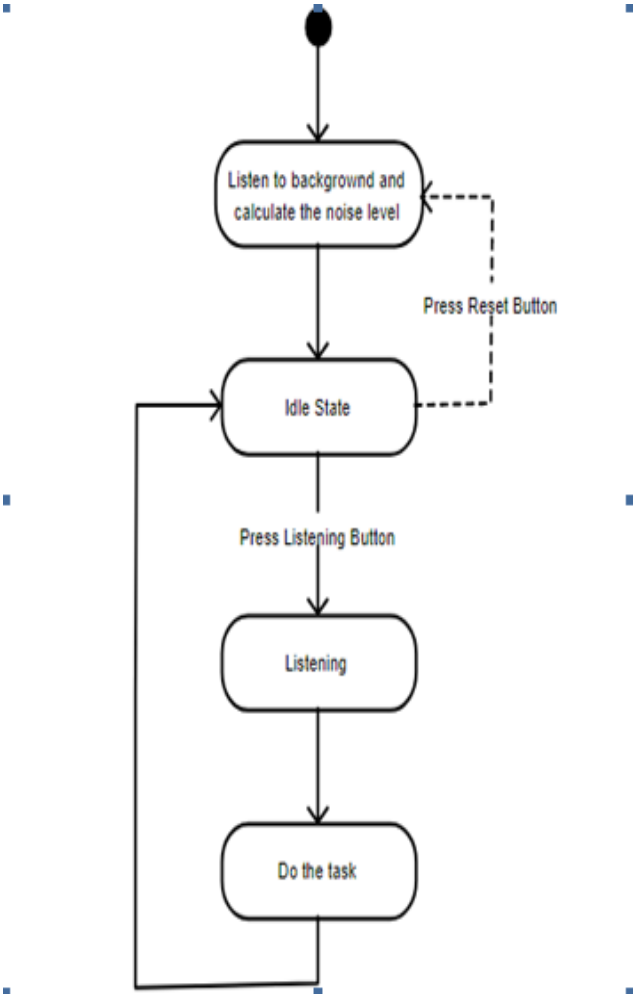

Figure 1

VII. TYPES OF VOICE CAPABILITES

Voice recognition is a very crucial part of the voice recognition application experience. They let users carry out actions without hands and very fast. Voice recognition provides two types of voice actions:

System-provided

In this voice actions are task-oriented and are built into the various platforms. In this type, the application filters for the user in the activity that the user wants to start when the voice action is starts. Examples include "Take a note" or "Set an alarm".

App-provided

In this voice actions are app-oriented, and you declare them just like a launcher icon. Users say "Start Your App Name" and "open torch" , "call xyz"

to use these voice actions and an activity that you specify starts.

Our application is an App-provided application.

VIII. RESULT

The application Voice in Buzz successfully gives the result by executing the work. The application also shows the information to operate. Application listen the human voice and execute the work of calling someone from user contact and opening of different application and opening and closing of torch of mobile.

The results show reasonably good success in recognizing continuous speech from various speakers, for a large vocabulary. The different modules were analyzed in their respective domains and were successfully verified for different speech input files.

IX. DISCUSSION & CONCLUSION

The user can operate this application from anywhere. This application gives help while driving or busy in others tasks. Project work of speech recognition started with a brief introduction of the technology and its applications in different sectors. After the development of the software finally it was tested and results were discussed. It also do the task like of calling someone from user contact and opening of different application and opening and closing of torch of mobile.

X. FUTURE SCOPE OF APPLICATION

- ✓ Accuracy will become better and better.
- ✓ Dictation speech recognition will gradually become accepted.
- ✓ Sound Systems and microphones are using to suitable more quickly to change the background noise levels, different environments, with better recognition of material to be unused.
- ✓ Create calendar events: The conventional thing to do would be to open the Calendar app on the Android and create a new event the manual way.
- ✓ Different languages: To make the voice recognizing possible in different languages.
- ✓ Get directions: For example, you could ask Voice Command App "How do I drive from here to Bhilai?" Voice Command App should then direct you to the Maps app and provide the suitable driving directions for you to get to your target destination i.e. implementing GPS.

XI. FUTURE SCOPE OF VOICE RECOGNITION

Voice Recognition Software has many future scope and uses and the number of applications that users are finding for this technology has also increasing in the market. You only need to read through a few issues of Speech Technology Magazine to get an idea of how fast things are moving right now. There are many advances and uses of this software in every major Industry and companies:

- Transportation,
- Communication,
- Energy,
- Education,
- Military,
- Mining,
- Manufacturing,
- Policing,
- Prisons,
- Courts,
- Construction,
- Disaster Relief,
- Space

XII. APPLICATION OF VOICE RECOGNITION

Mobile: We can use this application in mobile also, the use of speech recognition as a mobile technology is rising. From mobile banking applications to virtual

assistants speech recognition enables users to control devices and complete several transactions easily by speaking.

Applications for the disabled: Speech recognition is one of the most important and helpful technologies for the disabled. When it is not possible for a user to use a keyboard and buttons or a similar tool, the technology allows users not only to get their expressions but also to control devices without touching.

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