

Smart Phone Based Personal Assistant System with Voice Narration

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Abstract: *Everyday smart phone user may look for a new application dedicated for his/her need. Android makes it easier for customers to get the use new content and application on their smart phones. Proposed system presents user friendly android application based on VOICE NARRATION. Voice narration is refashioning to typing on a keyboard [2]. Simply, you talk to the mobile and your words appear on the smart phones screen. For the past several decades, designers have processed speech for a different variety of applications ranging from mobile communications devices to automatically read the devices. However, with modern processes, algorithms, methods we can process speech signals easily and recognized the text. The proposed system will provide a fast method of handling smart phone and can help people with a variety of disabilities. It is useful for people who are disabilities and those people have problem while typing, painful, and impossible. This system is about to develop and on-line speech-to-text engine. The recognized text can be stored in a file. The proposed speech-to-text system directly acquires and converts speech-to-text. A speech-to-text system can also improve system accessibility by providing data entry options for blind, deaf, physically handicapped users. With the proposed system, users like (blind, deaf, physically handicapped) can access applications like (Gallery, Calling, Alarm, Music, SMS), can fetch required data with voice narration.*

Keywords: *Android, Voice Narration, Neutral Network, SDK, MIC.*

I. INTRODUCTION

In today's digital world the smart phones are becomes an integral part of everybody and also for disability people like (deaf, blind, physically handicapped). Generally, we use a smart phone for playing games, listening songs, calling, internet surfing, read something, chatting etc. But the information access and smart phone handling is done with touch event. Before touch on any menu or any application we have to must reading all things which are present on screen and then deciding what to do? Means touch on that menu or application for visual process. But in case of deaf people they are not able to hear any voice or audio information, in case of blind people they are not able to see any information which is present on the screen and incase of physically handicapped people they are not able to touch on the screen or access any information. For those people we are going to develop an android application that provide speech-to-text and vice versa for blind, deaf and physically handicapped people. For this system they feel friendly with smart phones.

We are searching for a few things like how we are going to access the application like SMS, Music, alarm, Calling, gallery etc. without any touch. ASR (Automatic Speech Recognizer) and TTS (Text-to-Speech) get used for converting speech-to-text and vice versa [1]. This technology improves the performance day by day.

The main goal of this system, the disability people also involve in digital world. Our system allows blind person his/her voice instead of converting speech-to-text. The system also provides option of content searching in a smart phone. The multimedia functions also operate such as Alarm, Music, SMS, Gallery, calling etc.

This system has following advantages: -

1. This system mostly helpful for blind, deaf, and handicapped person as well as the users who makes grammatical mistakes while typing.
2. This system provides interactive and easy interface.
3. Ease of Use.

II. ANDROID

ANDROID is an OS developed by Google, based on the Linux kernel and design primarily for touch screen mobile devices such as smartphones and tablets. Android's user interface is mainly based on direct manipulations using touch gestures that loosely correspond to real world actions such as tapping, swiping and pinching. One of the widely used mobile OS these days is Android. Android is a software environment for mobile devices that includes an operating system, middleware and key application [2]. Main features of Android Operating system are:

- 1) Free use to all user adaptation of operating system to manufacturers of android mobile devices [2].
- 2) Quick and easily development of application using development tools in android and rich database of software libraries[2].

VOICE NARRATION

“Narrative voice is a related topic to think about, and especially important in third person stories. First person narratives already have a narrator built in; the narrative voice is the teller's voice.”

Elements of Voice Narration:

- 1) Speech Acquisition
- 2) Speech-to-Text Conversion
- 3) Text-to-Speech Conversion.



PROBLEM DEFINITION

To design and develop an android application for those who are blind and physically handicapped. The application takes a speech as an input and convert it into text as well as it performs text-to-speech conversion. Access the application and perform the desired task for that purpose it is very useful to the blind people such as they only speak in front of their smart phone and automatically text will return in a text field of smart phone. Due to this blind and physically handicapped people are easily interact with android application.

III. EXISTING SYSTEM

In the past for managing the large amount data or typing the text is very time consuming [2]. And it is not hand able by disability peoples. Few people make the grammatical mistakes while typing so, if they send message to another people, they cannot understand what they actually say. For disability like blind, physically handicapped, deaf people no services are available in market so, they cannot able to use smart phone. In some existing system they provide voice narration but they not detect proper voice input. For that it is very useful for blind, physically handicapped and deaf people such as they only give voice command in front of their smartphone and automatically text will be written and for user confirmation system also provide voice output.

IV. PROPOSED SYSTEM

In this section, we will discuss working of the proposed system for mobile platforms. The block diagram of our proposed system is depicted in Fig 1.1. The architecture shows major components of present system which are.

1. Music – Listening Song
2. Gallery – Photo Viewer
3. SMS – Sending and Receiving Message
4. Calling – Receiving and Disconnecting calls
5. Alarm – Set Alarm

In the following section we will also discuss Each of the modules in details.

User Authentication:

In all above the module user has to give login information such as his/her username, password through voice commands [1]. For blind user's system will produce response in a voice. It provides an option to save login information of user so that the user does not have need to re-enter the login information.

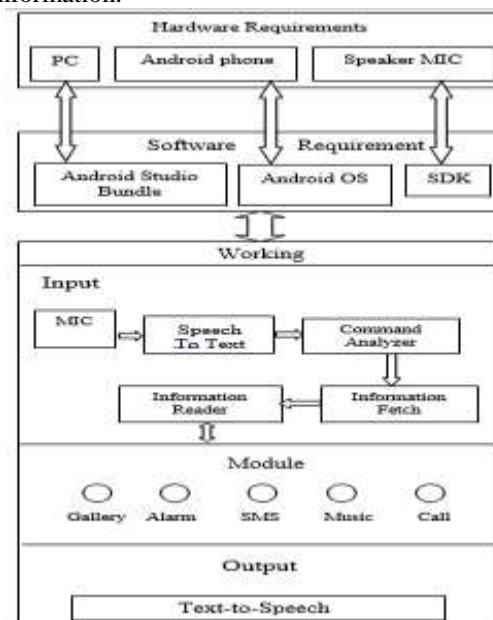


Fig 1-: System Architecture

1) *Music – Listening Songs*

Options in Music:

In this module user can listening the songs, change the song, delete the song, set as ringtone etc. things related to music will happen with voice command.

2) *Gallary – Photo Viewer*

Options in Gallery:

In this module user can open the gallery, viewing the images by next- previous commands, delete, slide images, image details, crop, cut, paste, copy, adding into favorites, picture editing, set picture as (home screen, lock screen etc.), rotating etc. will done by using voice command.

3) *SMS-Sending and Receiving Message*

Options in Music:

In this module user can send message, receive message, delivery message, draft message, searching message etc. are perform on a voice command.

4) *Calling – Receiving and Disconnecting Calls*

Options in Calling:

In this module user can receive call, disconnecting call, call log, call history, block contacts, searching contact etc. calling related things will happen by using voice command.

5) *Alarm – Set Alarm*

Options in Alarm

In this module user can set alarm, dismiss alarm, snooze alarm, alarm settings etc. will done by using voice commands.

GOALS AND OBJECTIVE

1. User friendly application for disability people.
2. Easy assessment.
3. Reduces typing efforts.
4. Increase the efficiency.
5. Reduce input devices.
6. Recognition of speech.
7. We can achieve more work at minimum time.

CONCLUSION

Voice Narration system helps disability people to involve in a digital world of smart phones. And also this system provides friendly environment for those people who make a grammatical mistake while typing. This system also helpful for those peoples who has poor knowledge about smartphone. For confirmation of user system can read itself.

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