



VOICE ASSISTANT - A REVIEW

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Abstract— The purpose of this study is to discuss the development of a Python-based Intelligent Software assistant for the blind and visually impaired and everyone. The application is designed to make it easier for visually impaired or blind people to access Android devices so that they can use library resources on Android devices. **Design/Methodology/Methods** Collect mandatory data from magazines, articles, books and samples, and analyze similar applications. The application development method used is the scrum method, including backlogs, sprints and scrum meetings. From the operating point of view of the application, both voice-to-text and text-to-speech methods are used. **Conclusion** The application has been tested by some users. Who is completely blind and has visual impairment, and this app has been given good reviews. In terms of implementation, the user gave a very satisfactory answer to this application. Although the app is easy to use, so are users Gives satisfactory answers to questions about the usability of this application. **Limitations/research impact** The application is still limited by user penetration, and the application will only be built using Python as a platform. In addition, due to the reliance on Google libraries, it is very inconvenient to implement this application in a way that only the local community can understand. Social bullying through this application has an impact on society, especially people with weaker eyesight may be more productive and independent. This can reduce social pressure in the community. **Originality/Value** The application provides the blind, visually impaired and other users with easy access to library resources on the device where the application is installed from the Android device. This feature can improve the access rights of the blind, visually impaired, and ordinary people to the library. Artificial intelligence technology is becoming more and more active in human life The emergence and widespread use of the Internet of Things (IOT) has facilitated this. The way autonomous devices interact with people and themselves is becoming more and more intelligent. New possibilities have led to the creation of various systems to integrate smart things into the social networks of the Internet. One of the current trends in artificial intelligence is the technology of recognizing human natural language. A new understanding of this topic may lead to new methods

of natural human-computer interaction, in which the machine will learn to understand human language by setting up in it and interacting with it. One such tool is a voice assistant that can be integrated with many other intelligent systems.

Keywords— Python, Visually Blind, voice assistance, Speech-to-text, text-to-speech.

I. INTRODUCTION

The rapid development of artificial intelligence and machine learning has promoted the development of speech recognition technology, which has actively penetrated into all areas of our lives. This is not surprising: for socially dependent people like humans, speaking is of course a more natural activity than writing or even writing. The average person can input about 40 characters per minute, but he can speak 150 characters. This comparison, and the many other benefits we discuss below, shows why voice technology should be taken seriously, rather than just thinking about it. IT giants and smart home enthusiasts, but all business owners.

In the 21st century, human-computer interaction is rapidly being replaced by automation. One of the main reasons for making this change is performance. This is more of a major technological change than a breakthrough. In the world, we train our machines to do their own work, or use machine learning, neural networks and other technologies to think like humans. Now, in our age, we can use virtual assistants to talk to our machines. There are companies like Google, Apple, Microsoft, and other companies with virtual assistants (such as Google Now, Siri, Cortana, etc.) that can help users manage computers. These types of virtual assistants are very useful for the elderly, blind and disabled, children, and others by simply inputting data in the form of voice. Interaction with cars is no longer a human problem. Even blind people who have never seen a car can only interact with the car using sound. Some of the basic tasks that are supported by most of the virtual assistants are:

- Checking weather updates
- Sending and checking mails
- Search on Wikipedia
- Make and receive calls



- Stream music
- Open applications
- Text messages etc.

II. PROPOSED ALGORITHM

• Give Commands to device:

First the user gives command to the device which is in the form of speech.

• Listen Commands:

After giving the command by the user the device will listen to the commands of the user carefully.

• Recognizes speech/command:

After listening the command it will first recognize it.

• Conversion of Speech-to-text:

As it recognizes the speech it will convert the given speech into the text format

• Perform task:

After conversion from speech to text it performs the required operations on the text to develop/give the desired output to the user.

• Conversion of text to speech:

After doing all the operations it converts the text into the speech form and delivers it to the user as the output is required.

III. CONCLUSION

In this article, we discussed a voice-activated personal assistant developed using Python. The wizard is currently online and performs basic tasks such as updating the weather, streaming music, browsing Wikipedia, opening PC applications, and so on. The current system functions are limited to the network. Through the update of the wizard, machine learning has been built into the system, resulting in more accurate recommendations to use the Internet of Things to control nearby devices, similar to Amazon Alexa. For functions that do not require an Internet connection, the use of the wizard will also be disabled.

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