iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 **Issue:** VI **Month of publication:** June 2021

DOI: https://doi.org/10.22214/ijraset.2021.35553

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue VI Jun 2021- Available at www.ijraset.com

A.I.- Smart Assistant

Nayan Srivastava[1], Smriti Verma[2], Vanchhita[3], Manvi Singh[4], Pragya[5]
[1,2,3,4,5]*Student, Department of Information Technology, Babu Banarasi Das National Institute of Technology & Management, Lucknow, Uttar Pradesh, India*

Abstract: Artificial Intelligent is widely used when it comes to everyday life. Computer science explains AI research as a study of brilliant agents. Every In almost any direction one turns to today, some computer-based information processing technology intervention, whether by a person knowingly or not. Artificial Intelligence has already changed our way of life. A device that we can see in its nature and take action increases its chances of success goals. Input to the recommendations algorithm can be a file for user database and items, and careless removal will be recommendations. User to install in the system by voice or text. This paper presents a new approach to it. All over the world, many people use the assistant. This paper introduces visual applications an assistant that helps to give humanity a chance at various domains. This paper also describes the annoyance of using visual assistant technology.
Keywords: Artificial Intelligence, Virtual Assistant, Voice Recognition, Automation

I. INTRODUCTION

A Virtual Assistant is a used software agent to perform an individual task or service. Sometimes the name 'Chabot has been used to refer to a visible helper, which is a new technology that will create intelligent personal assistant focused on user-based details. The software is focused on the virtual assistant as well the structural elements of the virtual assistant program. In this case software, we have tried to learn Virtual and virtual environment meeting assistant. There will be viewing examples of an intelligent system, and an easily accessible English language is available.[1] We offer multilingual software use in India. In this software, we provide a place to use visual assistant in various Indian languages to greet user, temperature measurement, weather forecast, web searches, opens files and applications from personal computer and other features. Most of the existing assistants are low conditions are visual, visual indicators on a PC screen. Still, a few simulations include additional relevant data, for example, audio through speakers or earphones. However, some experimental programs use haptic frameworks that have material data, in general, known as energy input. Therefore, we can stress the above Virtual ideas in one definition. A Virtual Assistant is the line UI that includes continuous producing and communicating through multiple sensory channels such as visuals, sound-related or instrumentation.[2][4]

II. BACKGROUND STUDY

As mentioned above, the assistant comes to an image where the user can search for files from the program, Weather, time, website, jokes through the voice command. With the help of a voice command user who can retrieve any data and information stored on the user's system. The system can email the recipient using a command such as an email to the recipient's name or email address using the SMTP server. In this case, if the user wants any translation, that will happen with gTTS.[4] There are a few APIs available that can switch from content to talk in python. One such API is the Google Text to Speech API, commonly called the gTTS API. GTTS can easily use a tool that converts embedded content into a sound that can survive as an mp3 file.[2]

III. RELATED WORK

Most existing projects use speech recognition only using neural networks. Although their systems are moderately accurate, they are not adequate or efficient to use for actual use. There are a few reckless methods used:[3]

- Context-aware computing
- MFCC
- NLP

A. Context-Aware Computing

Context-aware computing is a category of programs that can sense their environment and adapt accordingly. This can be used to identify words spoken by people with different speech patterns. It can also take words that are mispronounced. The adjustment makes it very useful in real-time use as most systems operate only theoretically under appropriate conditions.[3]

B. MFCC

MFCC refers to Mel-Frequency Cepstral Coefficients. MFC is a collection of these coefficients. It is rated at the short-term power show of noise. This can be used to hear sound variations to detect the various variations needed for voice recognition.[3]

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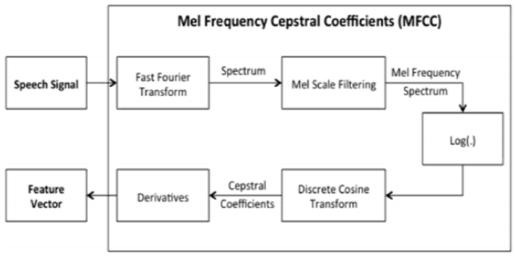


Fig. 1 MFCC

C. NLP

Natural Language Programming is a branch of Automation Intelligence that works in computers and human languages. It focuses on how to configure computers to process large amounts of data in native languages. This concept is used to describe a computer with different words in a particular language and to recognize them when they are spoken.[3]

IV. PROPOSED MODEL

In this project, the user first needs to call the assistant. After the event, the assistant will be able to pick up input from the user with the help of a voice command. After that, the user search details depend on his or her own choices[6]. If that choice is understood with the answers of personal assistants, it helps personal assistant respond to the user. With this, the user can search for any details. It can help the user identify the recently stored personal information in the system. This is very important and constructive then the library and communication can take place between **user and assistant.**[3][5]

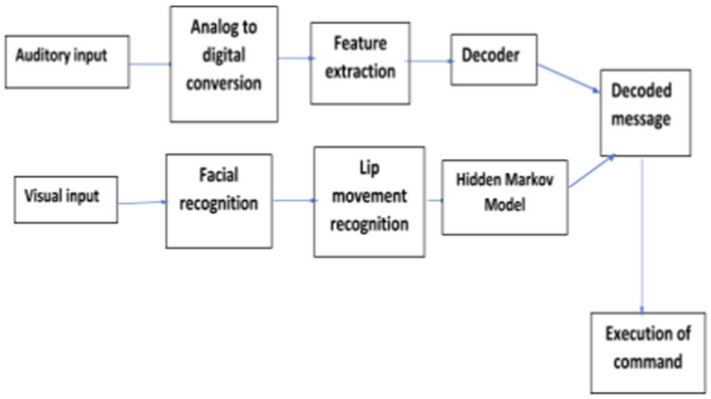


Fig. 2 Block Diagram for A.I.-Smart Assistant

A. Voice Input

The sensor present in the device captures speech/sound produced by a person. This audio stored in analogue waveform form must be converted to the digital waveform. This is necessary for the computer to have a sense of sound and its pattern[1]. The central concept used here is the neural network. The neural network is part of artificial intelligence and has no specific functions. When a system is given a large amount of data, it tries to make sense or find a pattern within the data. This pattern is kept as a vector or value I can see later a specific word or sound or events. It creates a variety of complex links during training, and these links can make it easy for the system to see the word there mentioned.[3][7]

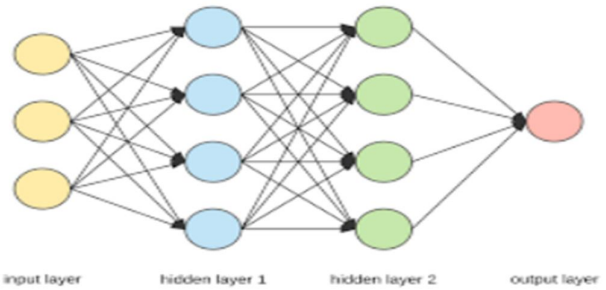


Fig. 3 Layered Diagram for Input and Output Process

B. Detection

Image captured with a visual device gives us a series of images of the speaker. From these images, lip movement can be achieved. This first requires finding the person's face and then his / her lips. After that, a series of trophies to win the game gives us lip movement. This organization is read by the system and analyzes and tries to identify the word using the hidden method of the Markov Model. Markov's Hidden Model is a robust Bayesian network. The dependence on flexibility gives us a variety of results depending on the inclusion.[7] So when the phrase says he said Markov's hidden model forms an acrylic graph, various explanations the movement of the lips may have before contacting the next word even reduces to that separately similarities from data sets.[3]

C. Deduction

The program gets two identical results from the two modules above. The extent to which they are considered depends on the way a person speaks or the reliability of the camera in capture an image that is suitable for image processing. Which is brightness or angle affects the output value of the second module to be considered in the adoption of the sentence is completed. In the same way, highlighting or pronunciation affects the output of a single module to be considered.[3] The algorithm used to complete the percentage of modules and the reduction of the final phrase is complex but is an integral part of the process that combines voice recognition and image processing techniques to provide a practical and appropriate result.

D. Execution

The result from the previous module is a human expression compared to a database to test a given function of a phrase. It means it is about accumulating simple bot instructions in the database to perform the required task provided by the user. This command is then executed, and the result is displayed on the screen.[3]

E. Output

The result can be one of a variety of tasks that a personal assistant can do. Input is converted to a phrase linked to active commands. The flow of execution occurs as follows:

- The sound is recorded, and the picture is taken using the camera and microphone present in the phone. It is analyzed using various algorithms to convert this input into a logical phrase in the program database. This statement is then examined for any commands or answers that may be attached to the sentence. The answer is then printed or ordered.[3]

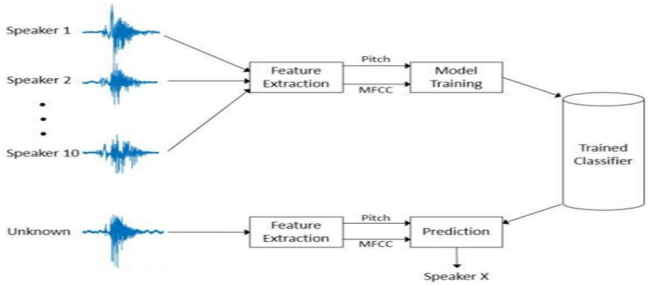


Fig. 4 Speaker Input

V. USE CASE DIAGRAM FOR AI-SMART ASSISTANT [4]

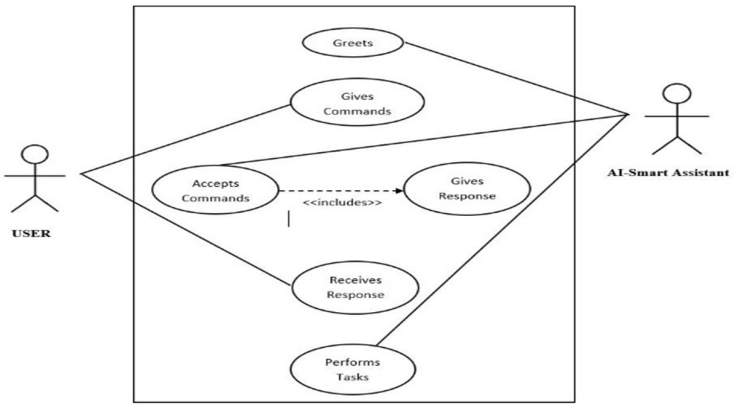


Fig. 5 Use Case Diagram

VI. FUTURE SCOPE

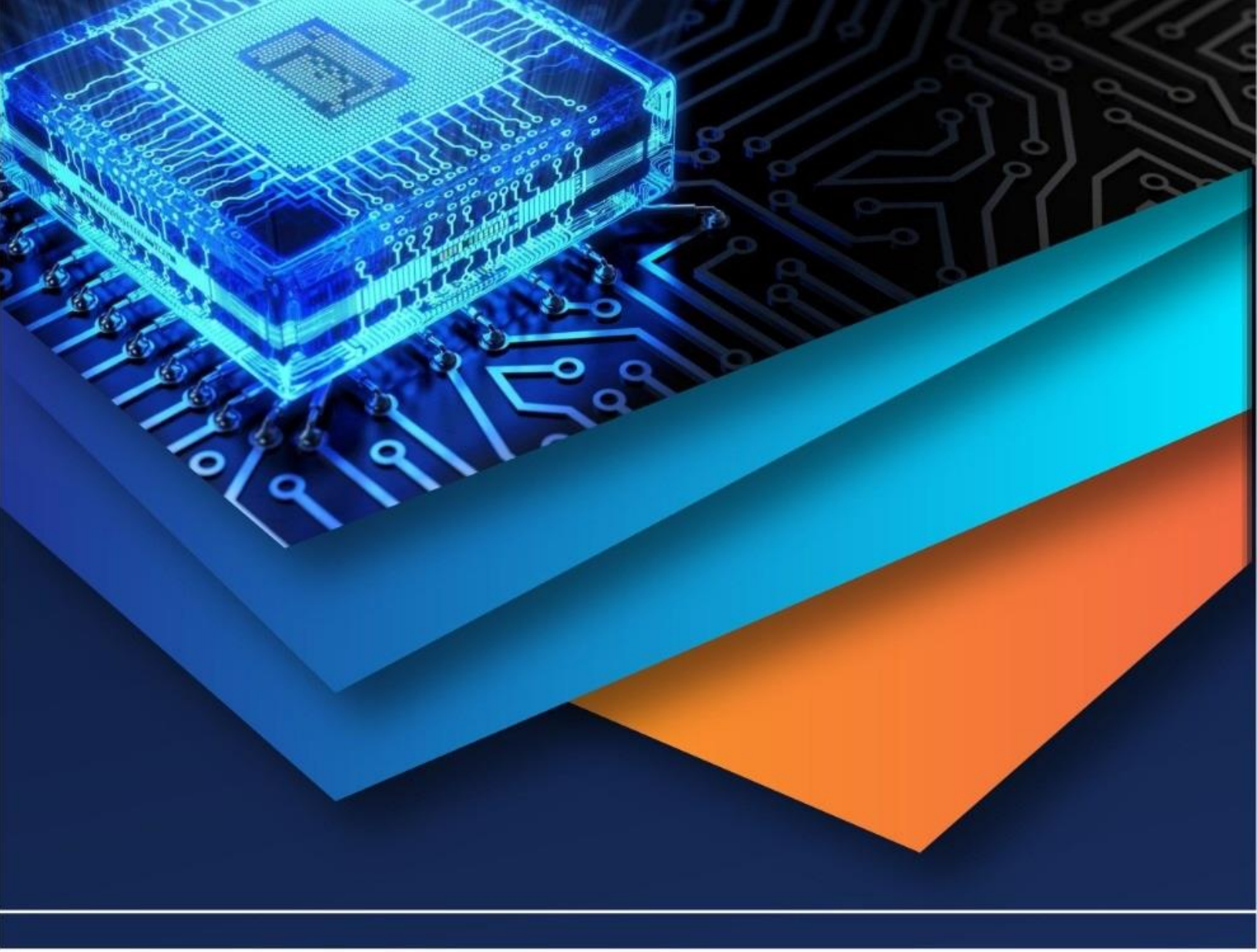
This project will help visually impaired people and challenge people. Instead, we will see a different market emerges in the middle. It will be a market where we can use automated AI providers depending on hardware purchases. It will lead to buyer conflict with third party solutions to remove executives solutions.[2][3][4]

VII. CONCLUSION

This test is about the first phase to investigate the possible work of remote assistants in virtual-complete development programs groups. While the results show some extraordinary commitment from remote assistants, those results were not genuine criticism. Without this effect, this visual inspection shows that it is compelling to be valuable so that visible groups use IVAs to assist with important rotation information important to partners.

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