SYSTEM FOR SIGN LANGUAGE CONVERSION & MESSAGE SERVICE

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Abstract: *The world's population of deaf and dumb people is growing, and they live in an introverted, closed community. As a result, deaf and dumb people are deprived of natural communication opportunities. Uneducated deaf dumb people have a difficult time communicating with other members of society. Humans depend on communication to get things done. Communication is seen as an ability that can be learned. With these key terms in mind, this article focuses mostly on assisting the disabled. This work aids in the improvement of contact with the deaf and hard of hearing. An advanced Android key board technology is presented in this paper in order to bring uneducated deaf-dumb people into society. Sign Languages are commonly used by deaf people in their conversations. On one end of the contact chain, the deaf person types Sign language, which is then translated into text (English and Tamil) on the other end. When a sign language is entered by the speaking team, it is translated to print. Deaf people can conveniently communicate with regular people everywhere by using this tool.*

Keywords: Communication, Sign Language, Text conversion.

1. Introduction

When it comes to emerging technology, disabled people face insurmountable challenges, such as using a screen, gaining access to information, editing and printing a file, and so on. In the current situation, texting using sign language has not been established. Today, the unprecedented advancement of emerging technology, including those related to data analysis and the Internet, provides remarkable opportunities for those who suffer from handicaps and disabilities to improve their quality of life. To a point, Android applications have seen a significant increase in their performance. It is now possible to get a cellular phone in this place. Deaf citizens barely used smart phones until SMS and MMS. Texting, on the other hand, helps deaf people to interact with both deaf and hearing people from afar.

2. Literature Survey

1. Translation of linguistic details or text into expression. It is also commonly used in audio reading applications for the blind. However, in recent years, text-to-speech translation technology has spread well beyond the disabled population, being a significant addition to the increasingly increasing use of automated voice recording for voice mail and voice response services. This paper demonstrates how to use Matlab to build a text-to-speech conversion module using basic matrix operations.

2. Hand segmentation approaches, feature extraction approaches, and gesture recognition approaches are the three general groups in which the approaches can be classified.

All of the available systems are not compact and are out of reach for the disadvantaged. This paper presents a modern Android technology that uses a handheld camera to identify Indian sign language and transforms it to text or speech input. Currently, the machine predicts 65 percent of the time correctly, and researchers are working to improve its reliability. As a result, it was decided to use hand speak technologies to incorporate the motion recording, which allows deaf people to interpret their related sign language video depending on the text input.

3. However, with a steadily rising population and an increasing number of people with blindness and other conditions, the use of technology in the area of education is becoming increasingly necessary. This project aims to offer explanations for some of these problems by constructing an immersive system using speech technologies. The idea of using voice over text technologies from the above suggested scheme comes from the fact that deaf people may either speak or be deaf, depending on their birth. It will be a game-changing move that will help hearing disabled individuals by boosting their morale and allowing them to interact with the general public. Designers have been processing speech with decades for a range of applications ranging from handheld messaging to automatic reading machines.

3. Block Diagram

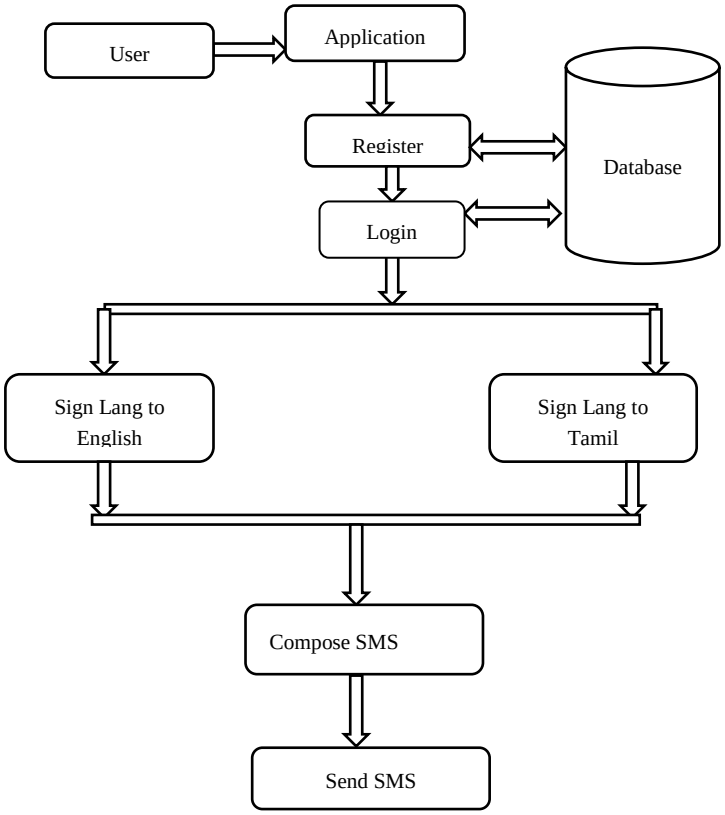

Fig 1. Application architecture

4. Proposed System

The new scheme would allow deaf and dumb people to communicate with normal people from every place. This device also allows for automated sign language translation into regional languages like English and Tamil. The translated text messages will then be sent to the intended recipient. It is a scheme in which sign codes are used to communicate with deaf and dumb people. Since the proposed programme was developed for the Android operating system, it can be used on a variety of Android devices.

Advantages:

1. It operates as an interpreter and translator, facilitating and mediating communication between Deaf and dumb people

2. Accurate and appropriate transfer of a message from a sign language into a target language based on their requirement

3. Since it is has developed under android OS it will be supportable for multiple systems such as mobile, tablet etc...

4. Can be implemented via the local language

5. Conclusion

The "SIGN LANGUAGE CONVERSION AND MESSAGE SERVICE SYSTEM" is a large system of many sub-processes. The machine overcomes the manual system's limitations. This project has been conceived, created, and introduced in order to provide a comprehensive approach for achieving the best possible outcomes. The project fulfils each effective user's desire to save time while still assisting deaf and dumb people in their conversations.

People who are interested in manually performing the task have seen this project in motion and expressed agreement with the operating processes and "conversion handling" used in the project.

6. Future work

Future enhancements can be made such as automatically find the object which is shown by the deaf and dumb people and generates the message depends on the actions.

7. Application

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8. References

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