International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 06 Issue: 05 | May - 2022 Impact Factor: 7.185 ISSN: 2582-3930

SMART AUDIO GLOVES FOR DEAF AND DUMB PEOPLE

Mrs. E. Madura, Kavin Kumar P, Mohana Prasath B, Subash M, Vignesh S.

Kavi.n Kumar P - Department of Biomedical Engineering & Nandha Engineering College, Erode.

Mohana Prasath B - Department of Biomedical Engineering & Nandha Engineering College, Erode.

Subash M - Department of Biomedical Engineering & Nandha Engineering College, Erode.

Vignesh S - Department of Biomedical Engineering & Nandha Engineering College, Erode.

ABSTRACT: Deaf-Mute people at some stage in the globe use gesture-based communication to talk with others, this can be possible for the people WHO have tough distinctive coaching. Everyday voters face bother in understanding the linguistic communication. To defeat these continuous problems, this framework is made. At no matter purpose the framework detects any gesture-based communication, it plays comparison recorded voice. This diminishes the correspondence hole among customary people and allows a free flow of interactions between public voters. This model contains of 3 modules, they are detecting unit, handling unit and voice stockpiling unit. This endeavor utilizes a flex device and WTV-SR voice recorder.

KEYWORDS: linguistic communication, Gesture based mostly Communication, Flex device, Recorded Voice.

1. INTRODUCTION:

In this paper we developed a Sign Language Glove which will support those people who are suffering for any kind of speech defect to communicate through signal. Everyday people face trouble in understanding the sign language. To defeat this continuous problem, this framework is created. At whatever point the framework detects any gesture-based communication, it plays comparing recorded voice. This diminishes the correspondence hole among customary individuals and enables a free flow of interactions between public citizens. This model comprises of three modules, they are detecting unit, handling unit and voice stockpiling unit. This undertaking utilizes a flex sensor and WTV-SR voice recorder. The flex sensor reacts to signals. The Accelerometer is used to check the hand movements. This strategy is increasingly exact available development and various dialects can be introduced without adjusting the code. Basis of this idea is a primary focus on the mobility of this system for day to day use. This model can be used by the people of all age groups and people can easily communicate between the normal individuals. They can also acquire new jobs for their lifestyle to run. There are so many government opportunities for deaf-mute people to work more effectively and not to sit ideal. By using this model, they can be normal as other individuals and come up in life by using their knowledge, earn and start a business too.

2. EXISTING WORK:

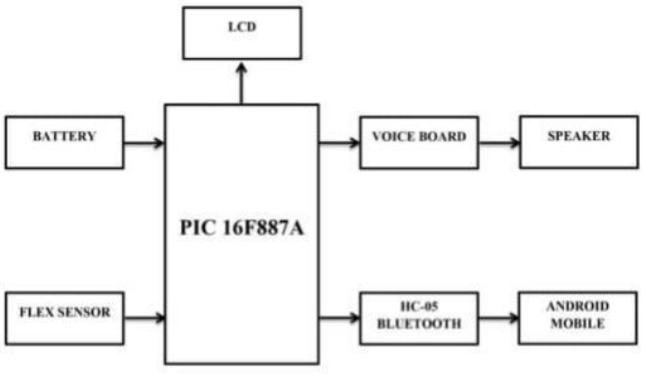
In existing system, there is no circuit is used to declare their thoughts of physically challenged peoples. And gesture-based papers or circuit are not available in markets. In existing method is sign language, it could not understand all people for communication. There after a circuit is used to design predetermined postures are captured image with deaf and dumb peoples sign language.

3. PROPOSED SYSTEM:

The main objective of the proposed method is to develop a cost-effective system which can give voice to voiceless people with the support of Smart Gloves. Using the Smart Glove by the deaf person enables them to communicate with others which also support to bridge the gap between person with disability and normal people. Issues faced by the deaf person regarding employment can be overcome by this method. So, in the proposed work an sharp microcontroller based system using Flex sensors will be developed which is following to:

- To advance coding for the system to that receives its instruction from gesture-based recognition system using Flex sensors.
- To develop a microcontroller based cost-effective system to recognizing gesture and convert into coded form so that it can be displayed if code matches with per determinate specific code.
- Normal person can text their Commands using keyboard.

4. BLOCK DIAGRAM:



5. METHODOLOGY:

In this project knowledge glove is enforced to capture the hand gestures of a user. Gloves area unit aimed to convert gesture into voice. During this project knowledge glove is enforced to capture the hand gestures of a user sensible gloves having sensors in it captures the movement of user and converts analog input into digital output utilizing resistance. Then this movement is given to microcontroller for more process. Currently gesture array is transmitted mistreatment RF transmitter and receiver. Recognized gestures area unit matched with prereading knowledge and if it matches given to speaker mistreatment voice section.

6. WORKING :

The proposed strategy makes an interpretation of communication via gestures to discourse using developments and signal of the wrist and the bowing of the fingers will for the most part fulfill them in passing on their musings all alone with no reliance on others. The framework beats the ongoing challenges of moronic individuals and improves their way of life. System efficiency is improved with the assistance of the voice module. It is easy to convey in anyplace. Along these lines, participation gets disentangled between people with or without hearing or talk inabilities.

Communication is the strongest element to share ones feeling or thoughts to others and they never share anything to others because the normal people won't understand the signs. So, in order to bridge this gap between the deaf-mute and normal people, the smart audio glove is used by deaf-mute to communicate with normal people. So, the smart glove uses the flex sensors which help them to convert the sign to speech. By this the hanging bridge is made erect.

7. OUTPUT:

8. CONCLUSION:

This system is going to be helpful for physically challenged folks and can tackle the gap between them and traditional folks. It's 2 manner moveable communication systems, it will be used at any time.

This sensible audio gloves will be wont to speak over phone victimization IOT throughout the emergency time.

REFERENCES

[1] Judy K.C. Sriharipriya, K.Aarthy, T.S.Keerthana, S.Menaga ,S. Monisha, ―Flex Sensor based Non-specific User Hand Gesture Recognition‖, International Journals of Innovative Research and Studies, Vol.2, No.5, pp.214-220, May 2013.

[2] Praveen Kumar, S Havalagi and Shruthi Urf Nivedita, ―The Amazing Gloves that give Voice to the Voiceless‖, International Journal of Advances in Engineering & Technology, Vol. 6, No.1, pp. 471-480, March 2013.

[3] Olga Katzenelson and Solange Karsenty, ―A Sign-toSpeech Glove‖, IUI Workshop: Interacting with Smart Objects, Haifa, Israel, and February 24, 2014.

[4] Shoaib Ahmed.V Department of Electronics and Communication C. Abdul Hakeem College of Engineering and Technology Melvisharam, Vellore, Tamil Nadu 632 509, India submitted the thesis report of ―Hand Gesture Recognition and Voice Conversion System for Differentially Able Dumb People‖, 2012.

[5] M. Ebrahim Al-Ahdal and Nooritawati Md Tahir, ―Review in Sign Language Recognition Systems‖ IEEE Symposium on Computers & Informatics, USA, pp.52-57, May 2012.

[6] Carlos Pesqueira Fiel, Cesar Cota Castro, Victor Velarde Arvizu, Nun Pitalúa-Díaz, Diego Seuret Jiménez, Ricardo & Rodríguez Carvajal, ―Design of Translator Glove for DeafMute Alphabet‖ 3rd International Conference on Electric and Electronics (EEIC 2013), Mexico, pp. 01-07,November 2013.

[7]Satjakarn Vutinuntakasame, V-ris Jaijongrak and Surapa Thiemjarus, ―An Assistive Body Sensor Network Glove for Speech- and Hearing-Impaired Disabilities‖, IEEE International Conference on Body Sensor Networks, Dallas, TX, pp. 7 – 12, 23-25 May 2011.