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| **WPAPER DETAILS** | **ABSTRACT** | **EXPLAINATION** |
| **Design of a Communication System using Sign Language aid for Differently Abled Peoples.** | One of the most precious gifts of nature to the human race is the ability to express itself by responding to the events that occur in its environment. Every normal person sees, hears, and then reacts to the situations by expressing himself. But some less lucky ones are deprived of this precious gift. Such people, especially deaf and mute, rely on some sort of gesture language to communicate their feelings to others. The deaf, dumb and the blind follow similar problems when it comes to the use of computers. In the era of advanced technologies, where computers, laptops and other processor-based devices are an integral part of everyday life, efforts must be made to make the disabilities in life more independent. | This software uses sign language recognition along with text to speech software to interpret  The message. |
| **Smart Communication for Differently Abled People** | Our day to day life most of the task we carry out involves speaking and hearing. The deaf and dumb people have difficulty in communicating with others who cannot understand sign language and mis-interpreter. In this paper, we designed a simple Embedded System based device for solving this problem. We have used flex sensor for getting the data from the deaf and dumb using sign language. When deaf wants to convey any messages then the user will give his voice as input to the android based voice app. Then the app will transfer this particular speech in to text and it will displayed in LCD. For Dumb People if they want to convey any messages to user Two Flex sensors are used to play voice. For Blind People, if they want to read any books or text the camera will act as eye to capture the text region and using Tesseract it will convert in to voice. | We have used flex sensor for getting the data from the deaf and dumb using sign language. When deaf wants to convey any messages then the user will give his voice as input to an android based voice app. For Dumb People if they want to read any books or text the camera will act as eye to capture the text region and using Tesseract it will convert in to voice. |
| **Real-time Communication System for the Deaf and Dumb** | This project aims to aid the deaf-mute by creation of a new system that helps convert sign language to text and speech for easier communication with audience. The system consists of a gesture recognizer hand-glove which converts gestures into electrical signals using flex sensors. These electrical signals are then processed using an Arduino microcontroller and a Python-based backend for text-to-speech conversion. The glove includes two modes of operation – phrase fetch mode and letter fetch mode. The phrase fetch mode speaks out words at once, while the letter fetch mode speaks out individual letters. This project forms a base infrastructure which can later be augmented with addition of different Sign Languages. | This project aims to aid the deaf-mute by creation of a new system that helps convert sign language to text and speech. System consists of a gesture recognizer hand-glove which converts gestures into electrical signals using flex sensors. The glove includes two modes of operation – phrase fetch mode and letter fetch mode. |
| **Two Way Communicator between Deaf and Dumb People and Normal People** | This system consists mainly of two modules, the first module is Indian Sign Language (ISL) gestures from real-time video and mapping it with human-Understandable speech. Accordingly, the second module is the natural language as Input and card with equivalent Indian Sign Language animated gestures. | ISL is an attempt to teach computers how to use gestures from real-time video and mapping them to human speech. |
| **Sign Language Recognition System to aid Deaf-dumb People Using PCA.** | This paper presents design and implementation of real-time sign language recognition system, to 26 gestures from the Indian sign language with MATLAB. | Real-time sign language recognition system to 26 gestures from the Indian sign language has been developed and tested in MATLAB, an open source software platform for developing computer programs with built-in sign language interpreters at Microsoft Research. |
| **Sign Language to Text and Vice Versa Recognition using Computer Vision in Marathi.** | In this system edge detection algorithm is used to recognize the input character image gray scale and recognition of the edges of the hand gesture. The system is able to handle the different input records images of alphabets, words, sentences, and translates them in text and vice versa. The system is designed to translate the Marathi sign language to text. | The system is able to handle the different input records images of alphabets, words, sentences, and translates them in text. System is designed to translate the Marathi sign language to text. Edge detection algorithm is used to recognize the input character image gray scale and recognition of the edges of the hand gesture. |
| **Sign Language Learning based on Android for Deaf and Speech Impaired People.** | This research makes an Android-based application that can directly interpret Sign language presented by deaf people in written language. Translation process Starts with the detection of hands with OpenCV and translation of and signals The K-NN classification. Tutorial features added in this application with the goal to train intensively to guide the user when using the sign language. | This research makes an Android-based application that can directly interpret Sign language presented by deaf people in written language. Tutorial features added in this application with the goal to train intensively to guide the user when using the sign language. The translation process starts with the detection of hands with OpenCV and translation of and signals. |
| **SOFTWARE ASSISTANCE TO DEAF AND DUMB USING HANDSHAPE ALGORITHM** | This application helps the deaf and dumb person to communicate with the rest of the world using sign language communication plays an important role for human beings. Communication is treated as a life skill. Keeping these important words in mind we present this project to mainly focus on aiding the speech impaired and paralyzed patients. Our work helps in improving the communication with the deaf and dumb. | This application helps the deaf and dumb person to communicate with the rest of the world using sign language communication plays an important role for human beings. We mainly focus on aiding the speech impaired and paralyzed patients. Our work helps in improving the communication with the deaf and dumb. |
| **COMMUNICATION DEVICE FOR DIFFERENTLY ABLED PEOPLE:A PROTOTYPE MODEL** | The process of communication between marginalized communities like deaf-blind-dumb people has always been a matter of great concern and these differently abled people are not able to easily communicate their thoughts and talks with other people as normal people does by using mobile phones, etc. So, it is the greatest need of this hour to think and act upon the development of such people as they are also the equal part of our society. | The prototype software built here provides various methods to interpret hand signs and uses sign to speech to help the user. |