1.Abhishek, K. S., Qubeley, L. C. F., & Ho, D. (2016, August). Glove-based hand gesture recognition sign language translator using capacitive touch sensor. In 2016 IEEE International Conference on Electron Devices and Solid State Circuits(EDSSC)(pp. 334-337).IEEE

In this paper an attempt has been made to design a sign language recognition system. An intelligent glove has been designed to automate the communication between a deaf-mute with others by converting sign language into speech or understandable language. The sensory gloves provide data of the human hand shape or movement and translate it to text and speech. It comprises hardware and software for translating sensor data. It is wearable devices that can be put on human hands and convert hand's gestures into signs letter by letter and send the data into the firebase for further processing. The glove is equipped with flex sensors and an inertial measurement unit to recognize the movement by monitoring the finger orientation and hand motion in three-dimensional spaces that senses a person's gestures in the form of finger bend and hand fist tilt. The Hall sensor has been used to process and collect data for training and model development. The three different machine learning algorithms, i.e., support vector machine, Naïve Bayes, decision tree, have been used for analysis. It has been observed that the support vector machine has the highest accuracy, i.e., 90%. After Analyzing, the data has been sent to the speech converting function, and then audible results have been produced.

2.Anderson, R., Wiryana, F., Ariesta, M. C., & Kusuma, G. P. (2017). Sign language recognition application systems for deaf-mute people: A review based on input-process output. Procedia computer science, 116,441, 448

Sign Language Recognition is a breakthrough for helping deaf mute people and has been researched for many years. Unfortunately, every research has its own limitations and are still unable to be used commercially. Some of the researches have known to be

successful for recognizing sign language, but require an expensive cost to be commercialized. Nowadays, researchers have gotten more attention for developing Sign Language Recognition that can be used commercially. Researchers do their researches in various ways. It starts from the data acquisition methods. The data acquisition method varies because of the cost needed for a good device, but cheap method is needed for the Sign Language Recognition System to be commercialized. The methods used in developing Sign Language Recognition are also varied between researchers. Each method has its own strength compare to other methods and researchers are still using different methods in developing their own Sign Language Recognition. Each method also has its own limitations compared to other methods. The aim of this paper is to review the sign language recognition approaches and find the best method that has been used by researchers. Hence other researchers can get more information about the methods used and could develop better Sign Language Application Systems in the future.

3.Badhe, P. C., & Kulkarni, V. (2015, November). Indian sign language translator using gesture recognition algorithm. In 2015 IEEE International Conference on Computer Graphics, Vision and Information Security (CGVIS)(pp.195-200).IEEE

This study could be a CNN-based human hand signal recognition methodology. CNN could be an investigate section of neural networks. Application of CNN to memo rize human signals, there's no need to create complicated calculations to extricate picture features and determine them. With the help of the convolution and sub sampling level of a CNN, invariant highlights are permitted with little disruption. To decline the colli sion of different hand postures of a hand signal sort on the acknowledgment preciseness, the principal axis of the hand is found to calibrate the picture in this work . Calibrated pictures are profitable to a CNN to memorize and recognise precisely. In a genuine circumstance, when ordinary individuals encounter with deaf people, communication deterioration arises

due to different manners of communication. In order to convey with the hearing disabled individual, the information about sign dialect is indispensable, merely it fetch to be an obstruction for those who don’t learn the dialect. The most common limitation confronted by hard of hearing individuals in communication is the nonattendance of a flag mediator. Individuals are not keen to memorize sign dialect on account of the miserable stipulate of sign dialect course for ordinary individuals.

Project
Real-Time Communication System Powered by AI for Specially Abled

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