Sign Language Recognition Using Image Based Hand Gesture Recognition Techniques

Sign language is a gesture - based language for communication of deaf and dumb people. It is basically a non-verbal language which deaf & dumb people use to communicate more effectively. But not everyone knows this languages and it creates a Barrier. various sign language systems has been developed by many makers around the world, but they are neither flexible nor cost-effective for end users. Hence, Here, Introduced software which presents a system prototype that is able to automatically recogonize sign language to help deaf & dumb people to communicate.

In this method, firstly Acquisation of data (camera Interfacing) is done, then the image is preprocessed. After -that the

Noise removal is taking place, then the thresholding. The Image Analysis is done & the contour is also detected.

pattern recognition & Gesture Recognition are developing fields of research. HGR system provides us, innovative natural way of communication. By considering in mind the similarities of human hand shape with four fingers & one thumb the software aims to present a real-time system for recognition of hand gesture on basis of detection of shape based features like, orientation, center of mass Centroid, finger status etc.

Here, the capturing of images is done with the help of a webcam. After that applying image preprocessing steps to remove unwanted noise & adjust the brightness of images, then perform image

analysis & reapply convexity algorithm to extract contour of hand position. Using a processor windows based opens image processing software & IDE used to analyze capture image size at frame rate 30 frames per second.