Abstract

Deaf and dumb people communicate among themselves using sign languages, but they find it difficult to expose themselves to the outside world. This paper proposes a method to convert the Indian Sign Language (ISL) hand gestures into appropriate text message. In this paper the hand gestures corresponding to ISL English alphabets are captured through a webcam. In the captured frames the hand is segmented and the neural network is used to recognize the alphabet. The features such as angle made between fingers, number of fingers that are fully opened, fully closed or semi closed and identification of each finger are used as input to the neural network. Experimentation done for single hand alphabets and the results are summarized.
Indian Sign Language Character Recognition using Neural Networks

- Vaishali S. Kulkarni, Dr. S. D. Lokhande, "Appearance Based Recognition of American Sign Language Using Gesture Segmentation\textquotedbl;,[Online].
- Klimis Symeonidis, "Hand Gesture Recognition Using Neural Networks\textquotedbl;,[Online].
- Ilan Steinberg, Tomer M. London, Dotan Di Castro, "Hand Gesture Recognition in Images and Video\textquotedbl;,[Online].
- http://www.deaftravel.co.uk/signprint.php?id=27
- Klimis Symeonidis, "Hand Gesture Recognition Using Neural Networks\textquotedbl;,[Online].

Index Terms

Computer Science

Pattern Recognition
Keywords
Indian Sign Language Recognition  Hand Gesture Recognition  Neural Networks
Activation Function