Abstract

Communication with the hearing impaired people without the help of interpreter is a big challenge for common people. Thus efficient computer based recognition of sign language is an important research problem. Till now numbers of techniques are being developed. This article explains a novel method to recognize the 24 static image based alphabets A to Z (excluding dynamic alphabets J and Z) of American Sign Language (ASL) using two different features. This method extracts the feature vector of the images based on the simple method of orientation histogram along with the statistical parameters. Further neural network is used for the classification of these alphabets. This method is qualified to provide an average recognition
rate of 93.36 percent.

References

- Henrik Birk and Thomas Baltzer Moeslund, "Recognizing Gestures From the Hand Alphabet Using Principal Component Analysis", Master's Thesis, Laboratory of Image Analysis, Aalborg University, Denmark, 1996.
Index Terms

Computer Science

Artificial Intelligence

Keywords

American Sign Language  Asl Alphabets  Neural Network  Static Hand Gesture  Orientation
Recognition  Histogram  Statistical Measures