Abstract

Vision-based recognition system has developed rapidly over the past few years. This paper presents hand gesture recognition system that can be used for interfacing between computer and human using hand gesture. In natural Human Computer Interactions (HCI), visual interpretation of gestures can be very useful. In this paper we propose a method for recognizing hand gestures using Support Vector Machine (SVM). We propose a system which can identify specific hand gestures and use them to convey information. In this system we select the feature vectors by Biorthogonal Wavelet Transform. These extracted features are used as input to the classifier. Multi Class SVM is used for classifying hand gestures into ten categories: A, B, C, D, G, H, I, L, V, Y. This system gives us good performance for recognizing the gestures. We can get up to 92% correct results on a particular gesture set.
Hand Gesture Recognition using Multiclass Support Vector Machine

- Y. M. Wu, "The implementation of gesture recognition for media player system", Master Thesis of the Department of Electrical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan, 2009.

Index Terms
Keywords

Gesture Recognition  Canny Edge Detection  Radon Transform  Biorthogonal Wavelet
Multiclass Support Vector Machine