Abstract

Facial expression is an essential and impressive means of human contact. This is important connection of information for knowing emotional case and motive. A facial expression pursues not only emotions, but other creative action, social cooperation and psychological characteristics. Appearance based facial expression recognition systems are analyzed and have pulled widen application. A new study of bit intensity with thresholding concept is applied on feature vector histogram for facial expression recognition proposed in this paper. Each image divided into equal sized blocks and extracts 4-bit binary patterns in two distinct directions for a pixel by measuring the gray color intensity values with its neighbouring pixels. Two binary patterns are concatenated then sorted into thresholding based index according to their wave-threshold coefficient values. For evaluation the proposed descriptors JAFFE dataset, Support Vector Machine are applied. Proposed method has achieved excellent achievement in terms of efficiency, robustness and lessens execution time.


**Index Terms**

Computer Science  
Image Processing
Keywords

Feature descriptor, soft wavelet threshold, similarity index, JAFFE.