Abstract

Automatic emotion recognition is one of the most challenging tasks in computer vision and robotics. Although the verbal communication is an essential element of information exchange, the communication would be more effective and efficient by involving non-verbal communication including facial expression interpretation. Many approaches and methodologies have been proposed in terms of face segmentation, facial features extraction, and emotion classification. This article discusses a model for Facial Expression Recognition, which recognize the emotions from human facial expressions in live video acquired with web camera or using recorded videos. This article explains an entirely automated system for emotion recognition of six emotions (anger, disgust, fear, happiness, sadness and surprise) plus neutral state, involving image acquiring, preprocessing, face detection, segmentation, features extraction, encode AUs and finally classification. This system acquires images either with web camera or import recorded videos. Finally, it utilizes the minimum AUs for emotion classification with Rule-Based Classifier.


18. Y.I. Tian, T. Kanade, J.F. Cohn, Evaluation of Gabor-wavelet-based facial action unit recognition in image sequences of increasing complexity, Proceedings Automatic Face and
Minimum AUs for Real-Time Facial Expression Recognition in Frame Sequence


Index Terms

Computer Science Pattern Recognition

Keywords

Facial Expression Recognition, Facial Action Units, Rule-Based Classifier.