

Software for Facial Emotion Recognition

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Abstract

The most expressive way humans display emotions is through facial expressions and that is why facial emotion recognition is being used in machine learning and human-computer interaction. This paper investigates the capability of global face image features and multi-class SVM classifiers to recognize facial expression. Various image features are extracted, as: Gabor filter responses; Angular-Radial-Transform and Discrete Cosine Transform coefficients, from the original and normalized self-quotient image. The performance of the SVM multi-class classifiers in emotion recognition is assessed on the JAFFE database. The experiments show that for all seven emotion the system's accuracy is only 65%. The result can be improved by selecting only four emotions (anger, happy, surprised and neutral), in which case the system may reach an accuracy of 93% (close to the state of the art).