Abstract

Behaviors, actions, poses, facial expressions and speech; these are considered as channels that convey human emotions. Extensive research has been carried out to explore the relationships between these channels and emotions. This paper proposes a prototype system which automatically recognizes the emotion represented on a face. Thus a neural network based solution combined with image processing is used in classifying the universal emotions: Happiness, Sadness, Anger, Disgust, Surprise and Fear. Colored frontal face images are given as input to the prototype system. After the face is detected, image processing based feature point extraction method is used to extract a set of selected feature points. Finally, a set of values obtained after processing those extracted feature points are given as input to the neural network to recognize the emotion contained.

Index Terms

Computer Science
Image Processing
Keywords

Image Processing, Facial Expression, Machine Learning, Python Programming, OpenCV