Abstract

The objective of this paper is to apply Support Vector Machine to the problem of classifying emotion on images of human faces. This well defined problem is complicated by the natural variation in people’s faces, requiring the classification algorithm to distinguish the small number of relevant features from the large pool of input features. Three different kernels i.e., linear kernel, polynomial kernel and RBF kernel are used to recognise eight facial expressions, anger, contempt, disgust, fear, happiness, neutral, sadness and surprise of human beings in still images. Accuracy of the three kernels is compared to judge the best kernel for facial expression recognition.

References

4. Emotional Expression Recognition using Support Vector Machine Melanie Dumas Department of Computer Science University of California, San Diego La Jolla, CA 92193-0114.
8. GUO Lei,WANG Qiu-guang, "Research of Face Detection Based on Adaboost Algorithm and OpenCV Implementation", Journal of Harbin University of Science and Technology, 2009.
13. Cohn-Kanade (CK and CK+) database Download Site http://www.consortium.ri.cmu.edu/ckagree/

Index Terms

Computer Science Pattern Recognition

Keywords

Facial Expression, Support Vector Machine, Emotion Detection