

Visual Based Emotion Detection

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ABSTRACT

Recognising and detecting emotions originally was a task only completed by humans. Recently, technology has developed systems that are capable of learning the processes of detecting the complex nature of emotions. Psychological research suggests that most human emotion is reflected in facial expressions and various physical gestures. This paper investigates whether it is possible for an android application to detect the users' emotion based on visual information. The application that has been developed contains very basic emotion detection technique (identifies only two emotions; happy and neutral), achieved by using cascade classifiers that detect the location of the face, eyes and mouth. This method of machine learning is combined with image processing techniques that pinpoint the centre of the eye and the outer lip regions followed by mathematical equations applied in order to compute their emotion. With additional development, the practical use of this application would enable users to track emotions throughout the day, providing a daily summary about their overall mood.

L Morgan, Visual Based Emotion Detection, *Proc. 13th School Conf. for Annual Research Projects*, L Morgan, pp. 1–4, University of Reading, 24th May 2016.