

Analysis Of Emotion Recognition From Facial Expressions Using Spatial And Transform Domain Methods

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Abstract: Facial expressions are non-verbal signs that play an important role in interpersonal communications. There are six basic universally accepted emotions viz., happiness, surprise, anger, sadness, fear and disgust. An emotion recognition system is used for recognizing different expressions from the facial images/videos and classifying them into one of the six basic emotions. Spatial domain methods are more popularly used in literature in comparison to transform domain methods. In this paper, two approaches viz., cropped face and whole face methods for feature extraction are implemented separately on the images taken from Cohn-Kanade (CK) and JAFFE databases. Classification is performed using K-nearest neighbour and neural network. The results are compared and analysed. The results suggest that transform domain techniques yield better accuracy than spatial domain techniques and cropped face approach outperforms whole face approach for both the databases for few feature extraction methods. Such systems find application in human computer interaction, entertainment industry and could be used for clinical diagnosis.