Automatic Classification of Facial Expressions from Video Stream using Decision Tree

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Abstract

Facial expression is one of the most powerful, natural, and immediate means for human beings to communicate their emotions. This paper presents automatic recognition system for Happy, Surprise, Disgust, Sad, Anger and Fear facial expressions contained in video streams using decision tree. The proposed method employs popular and updated 'Viola-Jones' detection method to detect the face, facial components and their classification using decision tree. This research work attempts to recognize fine-grained changes in facial expression and established their relationship with Facial Action Coding System (FACS). The proposed method resulted in average 76.43% correct classification of six basic expressions from video streams with 23.56% expression error rate.

References

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Index Terms

Computer Science

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Keywords

Face Detection  Facial feature point extraction  Facial expression recognition

Feature extraction

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