



RESEARCH ARTICLE

Performance Comparison of an Effectual Approach with K-Means Clustering Algorithm for the Recognition of Facial Expressions

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Abstract— Automatic Facial Expressions Recognition and Classification has become active research field in image processing area over a last two decades. It has many applications like human computer interaction, face identification and videoconferencing. In this paper, two approaches are presented for the recognition of facial expressions from frontal facial expression images. The comparison of K-Means Clustering algorithm with proposed approach for facial expression recognition has done. The main objective of this research work is to present a new approach that recognizes facial expressions automatically and also to show the effectual outcome of this approach over the existing K-Means Clustering approach. Both the facial expression recognition system uses same number of dataset for the analysis and implemented by using MATLAB. The systems follow a procedure for recognition that include pre-processing, face boundary detection, feature extraction and expression recognition. Experimental results show that the proposed approach gave much better performance in comparison with existing approach.

Key Terms: - Facial Expression Recognition; Facial Expressions; Face detection; K-Means Clustering Algorithm; Successive Mean Quantization Transform (SMQT)

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