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Abstract

Video classification has become one of the important research field as hundreds of videos are generated everyday which implies the need to build the classification system. To build faster and easy classification system, the visual content of video is used. Accuracy of classification depends upon the feature extraction which is one of the most important step in video classification.   This paper proposes the use of orthogonal transform to generate the feature vector and to investigate effectiveness of different transforms (Cosine, Sine, and Walsh). Experimentation is carried on different sizes of feature vectors which are formed by taking fractional coefficients of row mean of column transformed video frames. Classification algorithm from different families such as Bayes (Naive Bayes and Bayes Net), Function (RBFNetwork and Simple Logistic), Lazy (IB1 and Kstar), Rule (Decision and Part) and Tree (BFTree, J48 Random Tree and Random Forest) are used for classification. Experimental results and its analysis have shown the Simple Logistic classifier with Sine transform to be better for proposed data mining based video classification technique.

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Index Terms

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Keywords

Content based video classification; Transform Cosine ; Sine ; Walsh ; Classifier Bayes ; Function; Lazy; Rule; Tree classifier; Fractional content.