

Abstract

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Multiclass Object Recognition using Object-based and Local Image Features

This paper examines a combined feature extraction method for visual object recognition. The method is based on applying Bag of words (BoW) using the object-based Zernike Moment (ZM) shape descriptor and the Speeded up Robust Features (SURF) local descriptor on the detected objects in an image. Support Vector Machine (SVM) classifier is trained on the extracted features using a one versus all method. The experiments are tested on two benchmark data sets for object recognition like COREL 1000, and Caltech 101. Using this combined feature extraction method, the derived results outperform the other published methods applied on the same databases.