

## Scene illumination classification using illumination histogram analysis and neural network

### ABSTRACT

This study proposed a classification method to classify the considered image in the most similar illumination cluster rather than estimating an illumination value. This method categorizes the images based on inherent illumination data of scene and statistical features extracted from illumination histogram of image. It has advantages of high accuracy and flexibility of defining the classes. A trained neural network is taken into account in order to classify the image into predefined groups. Finally, for performance and accuracy evaluation we use misclassification error percentages and Mean Square Error (MSE).

**Keyword:** Illumination classification; Neural network; Histogram analysis