A colour-based building recognition using support vector machine

ABSTRACT

Many applications apply the concept of image recognition to help human in recognising objects simply by just using digital images. A content-based building recognition system could solve the problem of using just text as search input. In this paper, a building recognition system using colour histogram is proposed for recognising buildings in Ipoh city, Perak, Malaysia. The colour features of each building image will be extracted. A feature vector combining the mean, standard deviation, variance, skewness and kurtosis of gray level will be formed to represent each building image. These feature values are later used to train the system using supervised learning algorithm, which is Support Vector Machine (SVM). Lastly, the accuracy of the recognition system is evaluated using 10-fold cross validation. The evaluation results show that the building recognition system is well trained and able to effectively recognise the building images with low misclassification rate.