Image Retrieval and Classification Using Feature Swarm Neural Network Based SVM Classifier

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Abstract:
The content-based image retrieval (CBIR) system is very complex and applicable and often used for image retrieval and classification strategies, as it can be used to construct image database efficiently and with high effective order. The CBIR method usually retrieves the images by utilization of image features. We propose a neural system based system for enhancing image feature based recovery. We utilize colour histogram, wavelets analysis, texture using colour correlation graphing, distance metrics of separated pictures to catch the spatial relationship among pixels and in addition worldwide/visual appearance of pictures. Test results on a subset of 500 image dataset show the viability of the proposed technique and examinations show that the proposed technique gives critical change over previous Neural Technique based on 3 level feature extraction. In this research work, we exploit a technique called SVM (Support Vector Machine) as an image feature matching to help effectively retrieving the images using feature matching which have been randomly arranged. Moreover, we use vector quantization to reduce the features comparison for improving the retrieval efficiency. The experimental results show that the method with high recall and precision is promisingly high from previous optimizations.

Keywords:
ANN, CBIR, RNN, Features, Shape recognition, Retrieval Simulator tool.

Link:
https://www.academia.edu/34985949/Image_Retrieval_and_Classification_Using_Feature_Swarm_Neural_Network_Based_SVM_Classifier