Abstract

The texture feature description becomes a tremendous challenge in the field of computer vision and pattern recognition. The high-quality feature descriptor attributes some of which are unique, due to a large number of texture classes, robust against illumination variations, and low dimensional representations. A number of image feature extraction methods had been proposed, which can be divided into two categories: holistic and local image feature extraction. The holistic feature extraction method is very sensitive to changes in geometric shapes and some variations of illumination and noise. The local image feature extraction methods can effectively overcome those weaknesses. In this study, the texture features of an RGB image are built using the Local Weighting Pattern (LWP). By using the gray-level dynamic range modification technique, Fuzzy Membership Function (MF) is applied to LWP texture images to build Fuzzy-based LWP image (FLWP). From the resulting image is then used to generate a feature descriptor in the form of labels.
Texture Feature Extraction based on Local Weighting Pattern (LWP) using Fuzzy Logic Approach

References


15. T. M. Steren Chabert, Rodrigo Riveros, Maximiliano Godoy, Alejandro Veloz, and P. C.


Index Terms

Computer Science            Fuzzy Systems

Keywords

Texture feature extraction, Feature descriptor, Local Weighting Pattern (LWP), Fuzzy Membership Function