

Image Enhancement Method based on an Improved Fuzzy C-Means Clustering

ABSTRACT

Image enhancement is an important method in the process of image processing. This paper proposes an image enhancement method base on an improved fuzzy c-means clustering. The method consists of the following steps: firstly, proposed a fuzzy c-means clustering with a cooperation center (FCM-co). Secondly, using the FCM-co, divide the image pixels into different clusters and marked membership values to those clusters. Thirdly, modify the membership values. Finally, calculate the new pixel gray levels. This enhancement method can overcome the disadvantage of overexposure and better retain image details. Through the experiment, the test results show that the proposed enhancement method could achieve better performance.