Abstract

In this paper a comparative analysis to the problem of impulse noise reduction in grey scale image is presented. The basic idea behind this analysis is the maximization of the similarities between pixels in a predefined filtering window. The comparison introduced to this median filter and adaptive filter lies in the establishment of parameters of the similarity function and hence further improvement is possible in adaptive filter and also adapts itself the fraction of corrupted image pixels. The improved adaptive filter preserves edges, corners and fine image details, is relatively fast and easy to implement as compared to median filter. The results show that the adaptive filter outperforms most of the basic algorithms for the reduction of impulsive noise in
Comparative Analysis of Median Filter and Adaptive Filter for Impulse Noise - A Review

grey scale images.

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Comparative Analysis of Median Filter and Adaptive Filter for Impulse Noise - A Review

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Comparative Analysis of Median Filter and Adaptive Filter for Impulse Noise - A Review

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