Abstract

Digital image processing and video processing are mainly used for the noise removal technique is a highly demanded research field. The main objective of this paper work is to detect and de-noise the image using a novel two stage algorithm for the removal of random valued impulse noise from the images is presented. In this paper, the first stage does the noise pixels are detected using the average deviations and threshold value. In the second stage, the directional differences between the four main directions are calculated. The median values of the pixels which lie in the direction of minimum difference are calculated and the noisy pixel values are replaced with the median value. This method identifies the noisy pixels in the corrupted images. So the two stage algorithm for image denoising random valued impulse noise is used. Experimental results show that proposed method is superior to the conventional methods in Peak Signal Noise Ratio (PSNR) values of the image performs, with and without noise compared. Comparison of PSNR values of the proposed method and the existing techniques show that the proposed method perform better than the existing one.

References


**Index Terms**

Computer Science Image Processing

**Keywords**

Impulse Noise random Valued Impulse Noise noise Detection Image De-noising Nonlinear Filters
Removal of Random Valued Impulse Noise by Directional Mean Filter using Statistical Noise based Detection