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Abstract

Image processing is processing of images using mathematical operations by using any form of signal processing for which the input is an image such as a photograph or video frame and the output may be either an image or a set of some parameters related to the image. Images quality is often degraded by noises. Noise can occur during image capture, transmission or by film grain in it etc. Noise removal is an important task in image processing. Developing an

efficient method of removing noise from digital images before processing them is an essential process in image processing to achieve image enhancement. In the field of image noise reduction, several linear and nonlinear filtering methods have been proposed and various other algorithms were given to improve quality of different images. It is a challenging problem to remove mixed noise in color images. Generally, some image denoising filters can reduce either additive or impulse noise, but they fail to remove both. The bilateral filtering action can simultaneously remove impulsive and additive noise while preserving edge structures. Similarly, Image edge detection is a process of locating the edge of an image which is important in finding the approximate absolute gradient magnitude in gray scale image. The results of the noise removal have a strong impact on the quality of the image processing technique.

Refer

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Index Terms

Computer Science

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Keywords

Image Processing Linear Filter Non-linear Filter Image Denoising Additive Noise
Impulse Noise

Average Filter

Vector Median Filter

Bilateral Filter

Image Enhancement

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