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Abstract

This paper proposes a novel method which combines both median filter and simple standard deviation to accomplish an excellent edge detector for image processing. First of all, a denoising process must be applied on the grey scale image using median filter to identify pixels which are likely to be contaminated by noise. The benefit of this step is to smooth the image and get rid of the noisy pixels. After that, the simple statistical standard deviation could be computed for each 2?2 window size. If the value of the standard deviation inside the 2?2 window size is greater than a predefined threshold, then the upper left pixel in the 2?2 window represents an edge. The visual differences between the proposed edge detector and the standard known edge detectors have been shown to support the contribution in this paper.

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Index Terms

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Keywords

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