

An Automatic Method for Edge Detection Evaluation Based on Semi-Optimal Edge Detector

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Edge detection is considered as one of the most important fields in extracting critical features in an automatic image analysis. Edge detection has several methods in the sides of global, and the evaluation of these methods in perfect way is not available as it can be in an automatic way. Methods/Analysis: This paper displays a new process based on the one of the most dynamic techniques for new automatic edge detection evaluation based on semi-optimal edge detector. The main advantages of the proposed method are the evaluation of any edge detection methods with results to know which the best edge detection technique is. Findings: This paper shows an automatic experimental evaluation results for each technique of edge detection by the results of the algorithm with several preferable edge detection methods, like Sobel, Roberts, Prewitt, Laplacian of Gaussian (LOG) and Canny to get real images. After that, applying standard deviation with median filter to smooth image and get rid of the noisy pixel to perform an ideal images. Improvement: Finally, applying Pratt measure for each method of edge detection separately used to get the final results of the evaluation algorithm in terms of an automatic method for edge detection evaluation based on semi-optimal edge detector.

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