

عنوان مقاله:

A New Method for Detection of Edge in Digital Images with Fuzzy Logic and Prewitt Operator

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خلاصه مقاله:

In this paper, a method for edge detection in gray level images is presented with fuzzy logic and Prewitt operator. The proposed method includes two steps. In the first step, the input image is given to MATLAB fuzzy simulator to classify pixels based on two black and white values. Four Gaussian membership functions classify pixels. These membership functions obtain their input values from a 2×2 mask which is scrolling image pixels. After classification, it is time to adjust the results. In this method, 16 fuzzy inference laws were used and these laws specify ultimate value of edge pixels for show in output. In the second step, the adjusted image is given to Prewitt operator with fuzzy system to detect edge. Results of this research show that this method gives better results than other comparable methods .because it detects edges as continuous, flat and thin and prevents doubling edges

کلمات کلیدی:

edge detection, fuzzy logic, fuzzy membership function, Prewitt operator

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