

DETECTION OF DARK SPOT IMAGES BY USING ADVANCED SOBEL EDGE DETECTION TECHNIQUE.

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Abstract: In this paper describes the details about detection of dark spot of all kinds of images. Why do i focus this dark spot means, because now a day so many number of high quality pixel dimension based mobiles has come out into this mobile market. But in spite of this, low level and financially weaker peoples are cant able to buy high cost based mobile. So they bought low cost mobile has taken images are having many dark level pixels are presents almost all images. So the aim of this paper proposed the low dark pixels occurred means try to detect the edges of all the dark spot of the image in order to enhance its region. The outcome of the process would be more useful to the poor people.

Keywords: *Segmentation, Detection and Enhancement*

1. Introduction

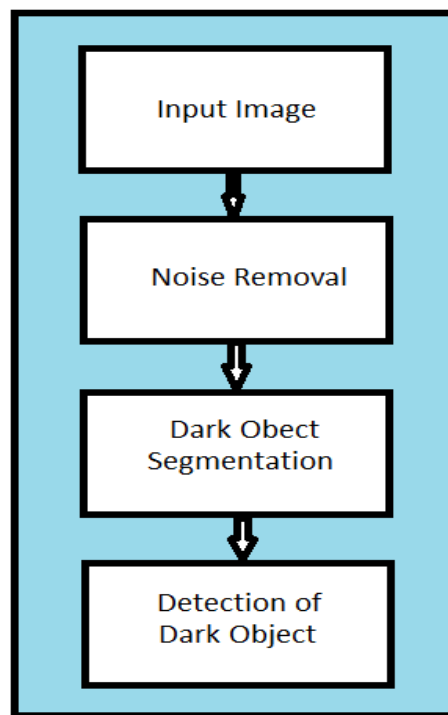
The Edge calculation replaces the strategy for 2X2 limited contrast to the strategy for compute the angle approval in the grid window for two titles of 45° and more 90° to compute the slope plentifulness. It might be the reason of the commotion of a parcel pictures are misjudged. In this paper, versatile separating is utilized to manage commotion. At that point, an edge picture its recognition calculation dependent tense continuity is proposed [1]. Edge identification is finished with high quality picture is unique picture. The edge detect and find the edge center correctly [3].

It is regularly utilized for a more significant level of portrayal - picture acknowledgment, picture upgrade, picture division and picture pressure. The motivation behind edge recognition is to distinguish the point where the property in the computerized picture changes fundamentally [6]. The current edge identification strategy is to work out the picture by a certaineigen value (slope or dim), and afterward as indicated by guarantee deigen value control edge for picture data handling[5]. A large portion of the edge

recognition calculation depend on mathematical distinction strategy, normal edge location administrators [4]. The computation strategies were comparing application situations since its impediments of the calculation itself, specific pictures can't get the ideal impact. Watchful administrator has a solid capacity to de-noising and great location exactness anyway the conventional of the canny calculation of change in edge determination is physically preferred, so prefer versatile capacity is poor.

2. Proposed Methodology

The Proposed Methodology shown in figure 2.1.



The Proposed Methodology consists of following three processes.

1. Noise Removal
2. Dark Spot Segmentation
3. Dark Spot Edge Identification (Advanced Sobel Technique)

Following is the Sobel Operator masks

-1	0	1
-2	0	2
-1	0	1

2.1 Noise Removal

This process is called for filtering method (Smoothing the object) to the original Image after conversion of color to gray image. Just for removing the noise presents in an original image.

The above mask represented the updated sobel mask edge.

But the flat sobel mask represented as negative value based edges is given below.

-1	-2	-1
0	0	0
1	2	1

2.2 Dark Spot Segmentation.

The Way of applying the Thresh holding techniques to convert the given gray scale image into binary image for differentiating the image as foreground and background. This binary image represents the result as dark pixels are represented in white color and bright pixels are represented in black color.

The Above masks are observed as in middle level 0's and first and third row represents positive and negative values of 1, 2 and 1. In this point the picture would conceived as even edges of picture.


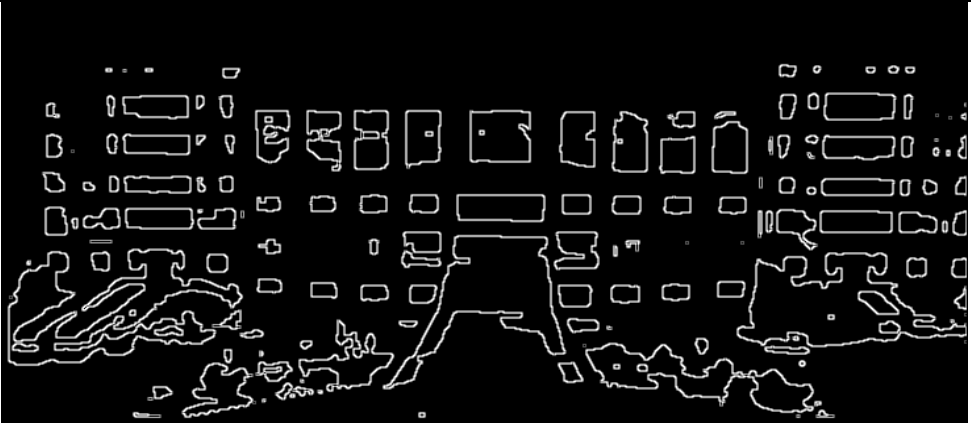
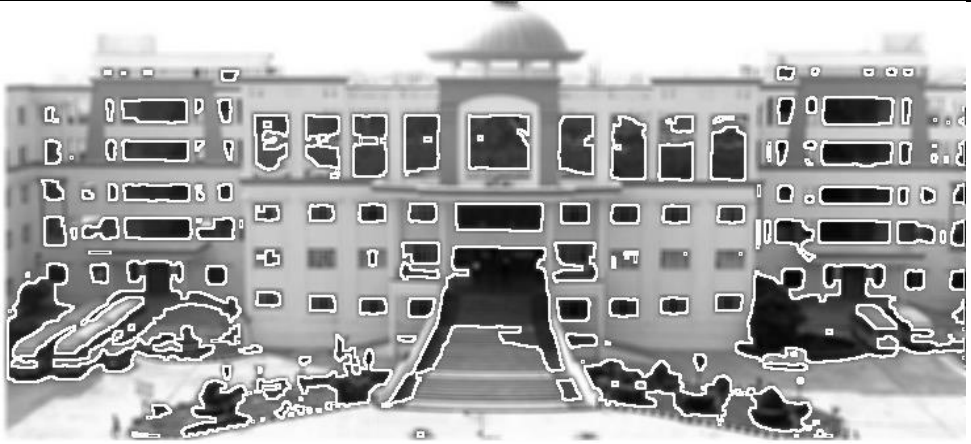
2.3 Dark Spot Edge Identification

After segmented the object from the binary image, to apply the Sobel edge mask value into the binary image to detect the edge of the object. The Sobel administrator is basically same like Prewitt operator.

3. Experiments Results and Discussions

The Experimental image is received from www.aits.tpt website, college front view photo and methodology based implementations are done at IDL image processing Software. The details of all images and its corresponding methods are given here.

<p>Fig.3.1 Original Color Image</p>	
<p>Fig.3.2 Gray Scale Image</p>	
<p>Fig.3.2 Filtered Image</p>	
<p>Fig.3.3 Segmented Image or Binary</p>	

<p>Image</p>	
<p>Fig.3.4 Object Detected Image</p>	
<p>Fig.3.3 Detected Object Mapped with Filtered Image</p>	



Conclusion

Hence the Sobel edge detection algorithms are clearly implemented and the dark spot from the original image identified precisely. The Result must be more useful to the needed people.

References

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