

ABSTRACT

Development of Contrast Enhancement Applications to Support Computer Vision

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Visual information can be obtained through human vision. One form of visual information is an image. However, many times the shooting has low light conditions. Under low-light image conditions, the computer vision process (Computer Vision) cannot run properly. Therefore, contrast is crucial in computer vision. The problem in this study is how researchers develop applications that can perform computer vision pre-processing functions using the Modified Sigmoid Transfer Function method. This study aims to increase the contrast of the image to obtain a high level of understanding of the information from the image. Researchers also aim to produce image quality based on the level of contrast with grayscale images. With the Modified Sigmoid Transfer Function method, the application will process all image pixels under single or batch-processing image input conditions. The results of the image after processing show that there is a significant change in the grayscale color value at each pixel so that the resulting image can be seen as experiencing an increase in contrast. In addition, the results of the histogram graph show that there is a significant change in the frequency of certain pixel color values according to the method applied. With these results, this research has succeeded in developing a contrast enhancement application that can perform computer vision pre-processing functions and can improve image quality through contrast enhancement.

Keywords : *Computer Vision, Batch Processing, Modified Sigmoid Transfer Function*

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