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A METHOD FOR SEGMENTATION OF COLOR IMAGES AND CONTOUR DETECTION

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Abstract. Image segmentation technology is widely used in image processing, object recognition, face recognition, and more. This article discusses segmentation of a color image for the purpose of recognizing water areas. After recognizing the water areas, their boundaries are outlined and the area of the contours is calculated.

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Keywords: Contour, image processing, image segmentation

1. Introduction

The image is a way of transferring information and the image contains useful information. Recognizing images and retrieving image information to perform some work is an important area of application in digital imaging technology, and the first step in understanding the image is image segmentation. In practice, it is often not interested in all parts of the image, but only in certain defined areas [4]. Image segmentation is one of the hottest points in image processing and computer vision. It is also an important basis for recognizing images. It is based on certain criteria for dividing the input image to extract the area we are interested in. This is the basis for image analysis and understanding of image extraction and recognition [5].

There are many commonly used algorithms for image segmentation. One of these is the *threshold segmentation method*. Threshold segmentation is one of the most commonly used segmentation techniques in regional segmentation algorithms [3]. Its essence is to automatically determine the optimal threshold according to a certain criterion, and to use these pixels according to the gray level to achieve clustering. Another widely used technique for image segmentation relies on the regional