Abstract

Edge Detection is an important technique in image processing and it is the process of grouping an image into units that are consistent with respect to one or more features. Edge detection using gray images has a lot of methods to segment and it has several sets of algorithms to represent it. But the images produce more information in scenes i.e., color images have fewer sets of methods to segment it. So, this paper represents color image edge detection methods in the literature and getting to prepare novel segmentation methods by extracting the color channels in the RGB image into three with combined form of masking, filtering, and Thresholding methods. Otsu method is one of the best and famous Thresholding method used in color image segmentation and it uses various combinations of masks to scan over the image to detect the correct boundary. Otsu method divides the segmentation tasks in two or more phases and provides the results better along with different phases. In the same way, this paper discusses about RGB color model and fuzzy membership functions method and particularly about the usage of fuzzy membership functions which are used to create masks with some sort of rules based on RGB channel extraction to scan the separated channel image with few combinations.
and include Threshold method and filtering for further to produce the output image in well enhanced manner.

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Index Terms

Computer Science | Image Processing
Keywords

Color Image Edge Detection, RGB Color Model, Color Channel Extraction, Fuzzy Inference System, Triangular Membership Function, Trapezoidal Membership Function.