Interactive Image Segmentation using Color and Texture Features

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Authors:
Sajan Kor, Pramod Kumar Sethy

Abstract

Image segmentation is the process of selecting objects of interest in background images. Since the fully automatic segmentation is difficult for natural images due to the complex color and texture features. This paper presents the idea of image segmentation using maximum similarity based region merging with minimum user inputs using simple brush strokes called markers(object and background markers). Therefore, the proposed system presents a new region merging method that grow regions from foreground/background seeds based on the color and texture features for interactive image segmentation. An initial segmentation is required to partition the image into homogeneous regions for merging. After the completion of the initial segmentation, initial segmented regions are represented by means of some descriptors such as color and texture to guide the region merging process. Therefore, the proposed method is very effective and it can quickly and accurately segment a wide variety of natural images with ease.

References


Index Terms

Computer Science

Image Processing

Keywords

Image Segmentation, maximum similarity, Region Merging, Mean Shift