

BLUR IMAGE SEGMENTATION USING ITERATIVE SUPER-PIXELS GROUPING METHOD

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Abstract

Image segmentation is a fundamental technology for image processing and image understanding. Images are partitioned into many regions with the same color, intensity, or texture homogeneity. However conventional image segmentation methods can make the segmentation on blur images inaccurate. Recently, superpixels have become an essential and fundamental preprocess in many computer vision algorithms. By using the superpixels, the accurate region boundaries in the blur images can be obtained. However, the region completeness is still a problem to overcome. In this study, by extending the superpixel segmentation method, the method of Iterative Super Pixels Grouping (ISPG) is proposed to overcome the inaccurate segmentation problem and guarantee the region completeness on the blur images. Furthermore, the proposed ISPG method can partition the image flexibly according to the region completeness measures. Experimental results show that the performance of ISPG method outperforms the conventional methods in terms of subjective and quantitative measures.

Keyword : Image segmentation; Superpixel; Iterative Super Pixels Grouping (ISPG)