

Multiple region segmentation with shape prior using local image fitting energy

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ABSTRACT

This work presents multiple region image segmentation model incorporates shape information driven by local image fitting energy. Fundamental segmentation models fail to segment desirable objects from background when the objects are occluded by other ones or missed some parts of the objects. To overcome this difficulty, we added the energy of prior shape same as previous literatures in the segmentation using local image fitting energy, which uses local image information to construct the energy functional. We considered two cases that shape prior is placed exactly at the locations of the desired objects and shape prior is placed arbitrary locations. This method brings more computationally efficient and fast algorithms for multiple region image segmentation with shape prior.

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