

# An improved image segmentation algorithm based on Mean-Shift

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**Abstract:** Traditional segmentation based on Mean-Shift is time consuming and low segmentation accuracy limited by the number of iterations. The paper proposed a new image segmentation algorithm based on Mean-Shift. It combine texton histogram with Mean-Shift. Comparing with traditional image segmentation algorithm, this algorithm takes into account the edge information of the image. Furthermore, It decrease the complexity for training and classification. Experimental shows that the algorithm proposed in this paper has better result during image segmentation. Comparing with the traditional image segmentation algorithm, The segmentation accuracy for this algorithm increased 4.3%-18.25%.

**Keywords:** Mean-Shift algorithm; Maximum response Filter; Texton histogram; K-means clustering; Mean-Shift patches