Abstract

Now days cauterization of images and video is easy with the advanced technologies in camera. But this images and videos are get easily contaminated by noise due to the characteristics of the image sensors due to this they are mostly blurred so we can loss important data. To avoid this problem we proposed an algorithm for segmentation based on Gaussian mixture model (GMM) and restoration technique with spatial smoothness constraints. The researchers worked on single type of image but the different environmental images are may be affected due to different noises so that researched work is not suitable for all environmental conditions. The proposed algorithm is works on the all type of images, which can remove noises from different diverse field of images with calculating different image parameter. From all of this we can get the optimum solution of suitable filters for combination of image and noise for reduction of noise by comparing of all of that. Here we also present the algorithm for video segmentation & restoration.

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**Index Terms**

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**Keywords**

GMM segmentation algorithm  
spatial domain filter  
PSNR  
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