Active Contour based Document Image Segmentation and Restoration using Split-Bregman and Edge Enhancement Diffusion

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Abstract

This paper presents PDE based document image segmentation and restoration approach using active contours, non-linear diffusion and split-bregman algorithm. We applied additive (Gaussian, salt & pepper) and multiplicative noise (speckle noise) to clean document images, taken from DIBCO 2009 image dataset. Along with image denoising and segmentation, the edges in the image are enhanced through non-linear diffusion operation. Active contour is also used to get a binarized document image.

Refer
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Index Terms

Computer Science  Image Processing

Keywords

Edge enhanced diffusion  split-bregman  level set