

IMAGE ENHANCEMENT PROCESSING USING ANISOTROPIC DIFFUSION

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ABSTRACT

A frequent problem we use to face during low-level vision consists of elimination of noise and small-scale details from an image at the similar time maintaining or even enhancing the structure of the edge. Anisotropic diffusion filtering using Non linear equations might be one of the adventitious solutions to acquire these goals. The given Approach is to generalize the diffusion process further into forward-and-backward process. Further the Forward - and Backward diffusion process could again be used in Enhancement of the resolution of the given image. A single image is being used for enhancement of resolution of that image by using interpolation and a forward-and-backward nonlinear diffusion post-processing provides suppression of ringing. Process is found to be very productive in distinguishing those medical images which gives similar images for two or more dangerous diseases. The process respects the boundaries between the edges.

KEYWORDS: Forward-and-Backward Process, Anisotropic Diffusion, Diffusion Coefficient, MRI Imaging, Perona-Malik Algorithm