Abstract

Image Filtering is a technique of removing unwanted Noise from image so that the image can be improved in terms of brightness and noise and contrast. Although there are various technique implemented for the Image Degradation and removing Noise level from image such as using Gaussian Blur. The Existing Gaussian Blur technique is an efficient technique which provides more Peak Signal to Noise Ratio and Less Error rate as compare to Zhang Distance and Local Phase Quantization Algorithms. But the technique implemented is not feasible in terms of all images and PSNR and Error Rate, Hence a new and efficient technique is proposed in the paper which is based on the concept of kernel and padding. This work also applies the Haar wavelet Transform for filtering the image in order to reconstruct image which have the noise and blur. The results of this paper show that the proposed method gives the better result from the previous methods. It seems to be that the PSNR, Mean Square Rate and execution time is better in the proposed scheme.

References
1. S.Ramya, T.Mercy Christial "Restoration of blurred images using Blind Deconvolution
   Algorithm", 2011 International Conference on Emerging Trends in Electrical and Computer
   Technology (ICETECT), pp. 496 – 499, March 2011.
2. Jinlian Zhuang and Youhen Xia “A Two-Dimensional Iterative Algorithm for Blind Image
   Restoration based on An L1 Regularization Approach”, 2010 3rd International Congress on
   embedded coding of wavelet coefficients", In Proc. IEEE Data Compression Conf., Snowbird,
4. W.A.Pearlman,"Performance bounds for sub-band codes", Chapter 1 in Sub-band Image
5. A.Said, W.A. Pearlman,"A new, fast and efficient image codec based on set partitioning
   243-250, June 1996.
6. P.Schelkens, "Multi-dimensional wavelet coding algorithms and implementations", Ph.D
   dissertation, Department of Electronics and Information Processing, Vrije Universiteit Brussel,
8. S.Ramya, T.Mercy Christial "Restoration of blurred images using Blind Deconvolution
   Algorithm", International Conference on Emerging Trends in Electrical and Computer
   Technology (ICETECT), pp. 496 – 499, 2011.
9. Ryu Nagayasu, Naoto Hosoda, Nari Tanabe, Hideaki Matsue, Toshihiro Furukawa
   “Restoration Method For Degraded Images Using Two-Dimensional Block Kalman Filter With
   Colored Driving Source”, IEEE Digital Signal Processing Workshop and IEEE Signal Processing
    algorithm based on adaptive Selection of regularization parameter”, Third International
11. Jong-Ho Lee, Yo-Sung H “High-quality non-blind image deconvolution with adaptive
    7, pp. 653-663, 2011.
12. Anna Tonazzini, Ivan Gerace, and Francesca Martinelli “Multichannel Blind Separation
    and Deconvolution of Images for Document Analysis”, IEEE Transactions on Image Processing,

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Keywords

DWT Transformation, Haar Wavelet, Deblurring, Filtering, Gaussian Blur, Image Degradation.