An Approach for Image Fusion using PCA and Genetic Algorithm

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Abstract

The pattern of mixing multiple images so as to get a single, well developed image is well established. Various fusion methods have been advanced in literature. The current paper is based on image Fusion using PCA and Genetic Algorithm. The pictures of equal size are considered for experimentation. In order to overcome the problems of conventional techniques Genetic Algorithm can be used in collaboration with the technique of PCA (Principal Component Analysis). In Image Fusion, Genetic Algorithm can be signed when optimization of parameter is required. Also for the optimization of the weight values, Genetic algorithm is used. The various parameters used to measure the ability of image fusion technique are Mean Square Error, Entropy, Mean, Bit Error Rate, Mean, Peak Signal to Noise Ratio. From the above experiment we find that this method works well and the quality of the output image is far better than previous methods.

References
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Index Terms

Computer Science Algorithms
Keywords

PCA, Genetic algorithm, Mean Square Error, Entropy, Mean, Bit Error Rate, Mean, Peak Signal to Noise Ratio.