Abstract

Medical image fusion has revolutionized medical analysis by raising the preciseness and performance of computer assisted diagnosing. This fused image is a lot of productive as compared to its original input images. The fusion technique in medical images is beneficial for resourceful disease diagnosing purpose. This paper illustrates completely different multimodality medical picture combination method and their consequences evaluate with various quantitative metrics. Firstly 2 registered pictures CT (anatomical information) and MRI-T2 (functional information) are taken as input. Then the fusion techniques are applied onto the input pictures such as Mamdani kind minimum-sum-mean of maximum (MIN-SUM-MOM) and Redundancy discrete wave transform (RDWT) and so the resulting fused image is analyzed with quantitative metrics namely Over all irritated Entropy, Peak Signal –to- Noise ratio (PSNR), Signal to Noise ratio (SNR), Structural Similarity Index(SSIM), Mutual Information(MI). From the derived results it's inferred that Mamdani type MIN-SUM-MOM is more productive than RDWT and also the projected fusion techniques provide additional info compared to the input images as justified by all the metrics.
Medical Image Fusion based on DWT and SPIHT Techniques with Quantitative Analysis

References

3. Richa Singh, Mayank Vatsa and Afzel Noore “Multimodal Medical Image Fusion using Redundant Discrete Wavelet Transform”.

Index Terms

Computer Science Image Processing

Keywords

Signal processing method, precise estimation of, roughly observed data,