Abstract

Image Enhancement is one of the most important features in Image processing domain whose main target is to improve with the help of which contrast and the visual appearance of an image can be improved that makes the input image more suitable than the original one for specific application. Medical Image enhancement is the active research field. A novel approach to enhance resolution of medical images using Dual tree complex transform, a filter and singular value decomposition (SVD) has been discussed. Here, SVD is proposed to enhance the contrast of an image while high frequency sub bands are produced using dual-tree complex wavelet transform. Filter is used to remove the artefacts produced by dual-tree complex wavelet transform. Interpolated filtered high frequency sub-bands and contrast enhanced low resolution image are combined using inverse dual-tree complex wavelet transform to obtain contrast enhanced image of super resolution. Qualitative and quantitative measures are used to justify the importance of proposed technique.

Index Terms

Computer Science

Image Processing
Keywords

Image Enhancement, DTCWT, SVD, MSE, MAE, PSNR