Abstract

Digital image processing refers to the process of digital images by means of digital computer. The main application area in digital image processing is to enhance the pictorial data for human interpretation. In image acquisition some of the unwanted information is present that will be removed by several preprocessing techniques. Filtering helps to enhance the image by removing noise. The aim of this paper is to demonstrate the lowpass and highpass filtering techniques, however they are the filtering techniques used in Fourier and Wavelet Transformations. In Wavelet Transform these two filters play an important role in reconstructing the original image by using subband coding. Lowpass filter will produce a Gaussian smoothing blur image, in the other hand, high pass filter will increase the contrast between bright and dark pixel to produce a sharpen image.

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**Index Terms**

- Computer Science
- Image Processing

**Keywords**

- Fast Fourier Transform (FFT)
- Lowpass Filter
- Highpass Filter
- Wavelet Transform