18XW47 MATHEMATICAL COMPUTING LAB PACKAGE ABSTRACT

**Topic:**

IMAGE PROCESSING USING DISCRETE WAVELET TRANSFORM

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**Implementation:** MATLAB.

**Abstract:**

The objective of package is image processing which contains features like image fusion in which 2 images from the user are fused using the discrete wavelet transform technique also supporting intensity modification. The fusion consists of two basic stages: image registration, which brings the input images to spatial alignment, and combining the image functions (intensities, colours, etc) in the area of frame overlap. Major applications of image fusion include medical imaging, satellite vision, artificial neural networks, etc

Other image processing techniques like changing scale, angle, colour, pixel distribution, converting to binary image, creation of histogram are also done. The user interface of the package is implemented through GUI features of MATLAB.

The ability to read in a wide variety of both common and domain-specific image formats make MATLAB one of prominent platform to implement image processing. It also ensures theimage processing steps used are completely documented, and hence can be replicated.