

# Image fusion using DWT and DCT algorithms.

## ABSTRACT:

The objective of image fusion is to combine relevant information from multiple images into a single image. Result of image fusion is a single image which is more suitable for human and machine perception or further Image-processing tasks. The objective in image fusion is to reduce uncertainty and minimize redundancy in the output while maximizing relevant information particular to an application or task. Fusion is an important technique within many disparate fields such as remote sensing, robotics and medical applications. Fused images can provide information that sometimes cannot be observed in the individual input images. Successful image fusion significantly reduces the amount of data to be viewed or processed without significantly reducing the amount of relevant information. This project uses Discrete Wavelet Transform (DWT) algorithm and Discrete Cosine Transform (DCT) in this process. The performance of the algorithms are compared and the experimental results are verified and found the output image qualities are improved.

*Key words:* image fusion, wavelet transform, dwt, dct, multi-focus.

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**Batch No.:38**

**Topic Name: Image fusion using DWT and DCT algorithms.**

## **Plan of Work**

<b>Phase</b>	<b>Status of work</b>	<b>Estimated Time</b>
<b>Phase-1</b>	<b>Project finalization and abstract preparation</b>	<b>2 Weeks (11/12/18 to 25/12/18)</b>
<b>Phase-2</b>	<b>Literature Survey</b>	<b>`15days (26/12/18 to 10/1/19)</b>
<b>Phase-3</b>	<b>Implementation and Simulation of Design</b>	<b>1 month (11/1/19 to 23/2/19)</b>
<b>Phase-4</b>	<b>Documentation Related Work</b>	<b>1 month (24/2/19 to 27/3/19)</b>

**Software and Hardware Requirements / Availability:**

**1. matlab-2018a.**

**Signature of the Supervisor**