MULTI

MODALITY

IMAGE FUSION

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**Problem Statement:**

 Every single modality image has its own drawbacks in providing needed information because each image is captured with different radiation power. In order to overcome this it is highly required to obtain information from multiple modalities which is used for clinical diagnosis. In this situation, fusion is a technique used to combine multimodality medical images such as CT, MRI, PET etc.

**Motivation:**

“Curiosity is the wick in the candle of learning”. This saying sums up why I chose this project. Image Processing enticed me. The idea of fusing multi modal images to get better results related to both the worlds was a beautiful idea.

The idea of combining CT Scan and MRI images in order to easily identify the problem related to the brain sounds really intelligent and is praiseworthy.

First of all the sole idea motivated me and secondly as I said the curiosity I had for learning image processing also seemed to play it’s part.

**METHODOLOGY:**

1. Reading the images.
2. Applying the wavelet transform on the images.
3. Using the Bilateral Filter
4. Applying the Entropy Based Fusion.
5. Inverse Wavelet Transformation.
6. Displaying the Fused Image.
7. Checking the result.

**Block Diagram of the project workings:**



