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A Project Report on

"*MULTI-SENSOR IMAGE FUSION APPLIED TO MORPH DYNAMICS OF COASTAL ENVIRONMENTS IN KUMTA TALUK*"

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ABSTRACT

Remote sensing is defined as obtaining information about an object by observing from distance and without coming into actual contact to it. The fusion of remote sensed images can integrate the spectral information of single sensor or the information from different kinds of sensors. In order to improve the dependability for extracting information, and enhance the efficiency of data. The image fusion results in a new image which is more suitable for human and machine perception or further image-processing tasks such as segmentation, feature extraction and object recognition.

The fused image should preserve, as closely as possible, all relevant information contained in the input images. The fusion process should not introduce any artifacts or inconsistencies, which can be discarded or mislead the human observer. In the fused image, irrelevant features and noise should be suppressed to a maximum extent. In this work image fusion is between multi-spectral images and panchromatic images using a discreet wavelet analysis method, with good signal processing and image processing traits and images is reconstructed by using inverse discreet wavelet transform using the fused approximation and details from the spectral and spatial information from the images.

i. A graphical user interface is developed for image fusion to make the outcomes available to the end user. To utilize GUI capabilities for commercial and economical activities and standalone executable application is also developed using ERDAS Imagine 9.1.