

Abstract:

The change-detection of remote sensing images can be considered as a problem of classifying a pattern into two classes corresponding to changed and unchanged areas. A new technique for change-detection based on histogram thresholding is developed during this project. A difference image is generated corresponding to multi-temporal and multispectral images. Input patterns are generated corresponding to each pixel of the difference image along with its neighboring pixels. A heuristic technique is used to identify initial labeled patterns without considering ground truth information. The unlabeled patterns are classified into changed and unchanged classes by applying the proposed histogram thresholding technique. Experimental results obtained by carrying out on multispectral and multitemporal remote sensing images, confirm the effectiveness of the proposed approach.

Keywords: Change detection, Difference image, Multitemporal images, Histogram thresholding.