

Efficient Schemes of Classifiers for Remote Sensing Satellite Imageries of Land Use Pattern Classifications

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Abstract : Classification of land use patterns is compelling in complexity and variability of remote sensing imageries data. An imperative research in remote sensing application exploited to mine some of the significant spatially variable factors as land cover and land use from satellite images for remote arid areas in Karnataka State, India. The diverse classification techniques, unsupervised and supervised consisting of maximum likelihood, Mahalanobis distance, and minimum distance are applied in Bellary District in Karnataka State, India for the classification of the raw satellite images. The accuracy evaluations of results are compared visually with the standard maps with ground-truths. We initiated with the maximum likelihood technique that gave the finest results and both minimum distance and Mahalanobis distance methods over valued agriculture land areas. In meanness of mislaid few irrelevant features due to the low resolution of the satellite images, high-quality accord between parameters extracted automatically from the developed maps and field observations was found.

Keywords : Mahalanobis distance, minimum distance, supervised, unsupervised, user classification accuracy, producer's classification accuracy, maximum likelihood, kappa coefficient

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