
Supervised Image Classification Methods For Extracting Man-Made Objects From High Resolution Remotely Sensed Imagery

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Abstract- Detecting objects meaningfully and correctly have been challenged problem for years. Several algorithms and techniques have been developed for the extraction of man-made objects from high resolution remote sensing imagery. This paper describes and comparison the performs of supervised techniques in the remotely sensed imagery. In supervised classification the user or expert determine training areas or sites. This chosen is important for well classification. The computer algorithm then uses the spectral property from this determined from these training areas to classify all image. The classes should not overlap or minimally overlap with other classes.

There are many different classification algorithms. Some of these are Maximum Likelihood , Minimum Distance and Mahalanobis algorithm. In Maksimum Likelihood algorithm, Assumes that the statistics for each class in each band are normally distributed and calculates the probability that a given pixel belongs to a specific class. Each pixel is assigned to the class that has the highest probability. In Minimum Distance algorithm uses the mean vectors for each class and calculates the Euclidean distance from each unknown pixel to the mean vector for each class. The pixels are classified to the nearest class. In Mahalanobis Distance algorithm, A direction-sensitive distance classifier that uses statistics for each class. It is similar to maximum likelihood classification, but it assumes all class covariances are equal, and therefore is a faster method. All pixels are classified to the closest training data. Describe supervised methods and evaluation of its performs using remotely sensed imagery and finally general tendencies in image classification are presented.

Keywords- Image Classification, Remotely Sensed Imagery, Supervised Techniques.