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TRAINING SAMPLES FOR CLASSIFICATION OF MULTISPECTRAL EARTH OBSERVATION DATA

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An important step in the use of pattern recognition methods is the training of the classifier. This work attempts to investigate the effects of some of the parameters contributing towards a correct classification.

Specifically, the effects of the number of training samples, the amount of detail in gray scale, and the degree of separability among classes are investigated. Empirical studies are performed, and results reported showing the interaction among these three parameters. Statistical analysis is performed on the results to determine their significance.

The results suggest that the independence of samples may be of importance in determining the number of training samples required. Further, as (1) the gray scale detail and/or (2) the class separability are decreased, the maximum classification, of course, declines. This work shows that even to achieve this lower maximum, a larger number of training samples is required.