

## Performance Analysis of Artificial Neural Network Based Land Cover Classification

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**Abstract :** Landcover classification using automated classification techniques, while employing remotely sensed multi-spectral imagery, is one of the promising areas of research. Different land conditions at different time are captured through satellite and monitored by applying different classification algorithms in specific environment. In this paper, a SPOT-5 image provided by SUPARCO has been studied and classified in Environment for Visual Interpretation (ENVI), a tool widely used in remote sensing. Then, Artificial Neural Network (ANN) classification technique is used to detect the land cover changes in Abbottabad district. Obtained results are compared with a pixel based Distance classifier. The results show that ANN gives the better overall accuracy of 99.20% and Kappa coefficient value of 0.98 over the Mahalanobis Distance Classifier.

**Keywords :** landcover classification, artificial neural network, remote sensing, SPOT 5

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