Abstract

Object recognition from satellite images is a very important application for various purposes. Objects can be recognized based on certain features and then applying some algorithm to extract those objects. Basically object recognition is a classification problem. For various remote sensing applications, waterbody acts as an important object which needs to be extracted. It is wise and better if possible, to extract waterbody object automatically from satellite data without any human intervention. This can be achieved using machine learning techniques. Artificial Neural Network (ANN) is such technique which makes machine intelligent by providing learning to it. This intelligent machine can extract objects automatically. This paper presents a methodology to extract waterbody object from satellite data in an automatic manner with the help of ANN. Training and testing dataset have been created by a domain expert which then have been used to train Multi Layer Perceptron (MLP) using Error Back Propagation (EBP) learning algorithm. Confusion matrix and Kappa coefficient have been used for accuracy assessment.
Automatic Object Recognition from Satellite Images using Artificial Neural Network

References


Index Terms

Computer Science
Artificial Intelligence
Automatic Object Recognition from Satellite Images using Artificial Neural Network

Keywords

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