Integrating Machine Learning and Expert System for Coastal Wetland Loss Detection

Fei Wang

Department of Geography and Anthropology

Louisiana State University, Baton Rouge, LA 70802

In this paper, an integration of machine learning and expert system for coastal wetland loss detection is presented. The expert system is built based on a set of rules that are generated by using a decision tree learner and training data. The study area is the coastal Louisiana. The major tools are ERDAS Imagine and Java, and data are LANDSAT 7 TM Images. In order to evaluate this approach, the detection result is compared to traditional approaches in terms of accuracy. The study suggests that the integration of machine learning and expert system could be recommended as a promising technique for coastal wetland loss detection.

Key words: Machine Learning, Expert System, Coastal Wetland Loss, Detection.