

Neural-Based Decision Trees Classification Techniques: A Case Study in Water Resources Management

陳莉, 魏志強, 徐訓新

Civil Engineering

Architecture

lichen@chu.edu.tw

Abstract

This article compares the decision-tree algorithm (C4.5) and neural decision-tree algorithm (NDT) in the problem of water resources management. The feature of the NDT algorithm is the combination of the artificial neural network (ANN) technologies and the conventional decision-tree algorithm (C4.5) capabilities. The applicability of the presented algorithms is demonstrated through a case study of reservoir releases during typhoons. Shihmen Reservoir in Taiwan is the study site. The findings show superior performance of the NDT model in contrast to the traditional C4.5.

Keyword : decision tree; neural network; data mining