

DECISION TREE CLASSIFIERS WITH GA BASED FEATURE SELECTION

SHANTA RANGASWAMY, SHOBHA G. SAMIR SHERIFF, SATVIK N & B. L. SHIVAKUMAR

Department of Computer Science and Engineering, Department of Civil Engineering,
R.V. College of Engineering, Bangalore, India

ABSTRACT

Machine Learning techniques like decision trees can learn classification patterns from training data and generate classifiers that can then be used to solve decision problems. In general, the input data to classifiers is a set of features, but not all of features are relevant to the classes to be classified. Although the problem of finding an optimal decision tree has received attention, it is a hard optimization problem. In this paper, we use a genetic algorithm to select a subset of input features for decision tree classifiers, with the goal of increasing the efficiency of the decision tree construction and thus, increasing its efficiency in solving decision problems.

KEYWORDS: Decision Tree, Machine Learning, Genetic Algorithms, Decision Problems