

Lalita Srichaiya 2010: Feature Selection Using Association Rules for Decision Tree Learning. Master of Science (Computer Science), Major Field: Computer Science, Department of Computer Science. Thesis Advisor: Assistant Professor Nuanwan Soonthornphisaj, Ph.D. 93 pages.

The Objectives of this research are to study a feature selection algorithm that can filter out a set of attributes in order to enhance the performance of decision tree learning. We proposed an algorithm called AssoTree that combines an association rule mining with the decision tree learning. The algorithm has 3 parts: data preprocessing, feature selection and attribute filtering, respectively.

The experiments are done on 4 benchmark data sets collected from UCI Machine Learning Repository. The performances of AssoTree are compared to two algorithms which are decision tree (J48) and Classification based on Association (CBA). The experimental results show that AssoTree outperforms other two algorithms since AssoTree can effectively filter out a set of attribute before supplying the dataset to the decision tree algorithm. AssoTree has the higher accuracy and gives the smaller tree size.

---

Student's signature

---

Thesis Advisor's signature