Alice d'ISoft

The Next Step in Data Mining

http://www.isoft.fr/

Outline

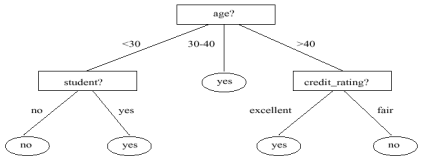
- About ISoft ...
- What is Decision Tree?
- Alice Process ...
- Conclusions

About Isoft ...

- ***ISoft*** offers a full consulting services in the Decision Support field, with the powerful Data Mining tool *ALICE d'ISoft* aimed at the business user.
- ***ALICE*** helps the business user to build *Decision Tree* in his data, and to extract new models, validated by his own knowledge, from these trends.
- ***ALICE*** is a *Interactive Exploratory System* to find *Classification* from Data by using of *Machine Learning(Decision Tree)*.

What is Decision Tree?

A *Decision Tree* is a flow-chart-like tree structure, where each internal node denotes a test on an attribute, each branch represents an outcome of the test, and leaf nodes represent classes or class distributions. The topmost node in a tree is the root node.

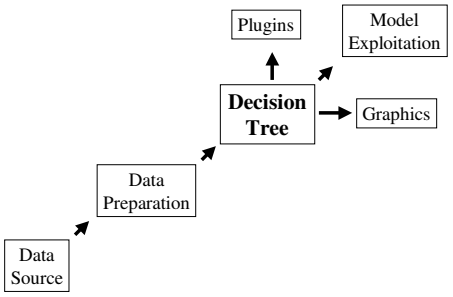


What is Decision Tree?

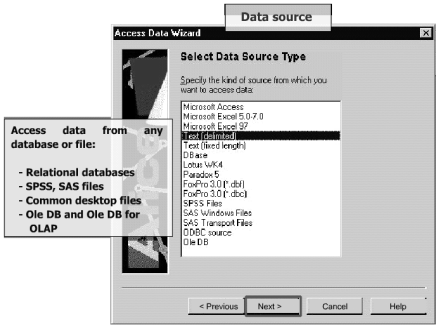
Generate a decision tree from the given training data.
Input: The training samples
Output: A decision tree.

create a node *N*;
if *samples* are all of the same class, *C* then
  return *N* as a leaf node labeled with the class *C*;
if *attribute-list* is empty then
  return *N* as a leaf node labeled with the most common class in *samples*;
select *test-attribute*, the attribute among *attribute-list* with the highest information gain;
label node *N* with *test-attribute*;
for each known value a_i of *test-attribute*
  grow a branch from node *N* for the condition *test-attribute*= a_i;
  let s_i be the set of samples in *samples* for which *test-attribute*= a_i;
  if s_i is empty then
    attach a leaf labeled with the most common class in *samples*;
  else
    attach the node returned by Generate decision tree(s_i, *attribute-list - test-attribute*);

Alice Process ...



Alice Process ...



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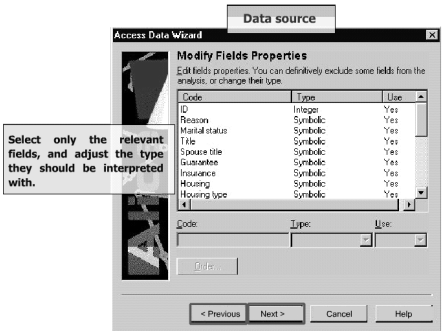

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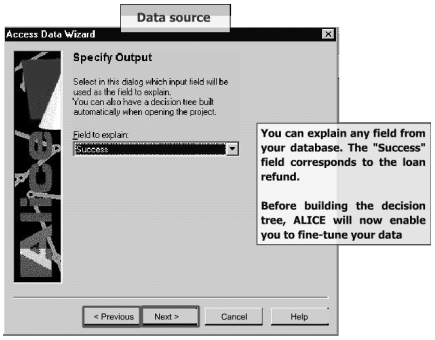


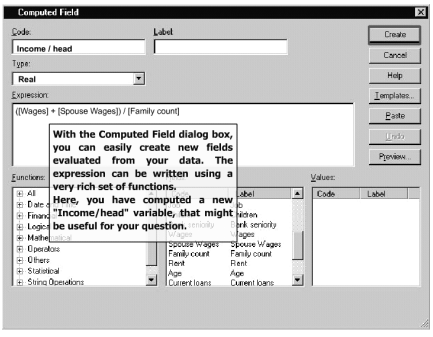
Alice Process ...

Data preparation

The aim of Data Mining is to find out the answer to a question, from the data you've collected. As your data is the source of the whole process, its preparation is crucial for the relevance of the answer. For example, an interesting variable for the study might not exist, but can be calculated from other available variables.

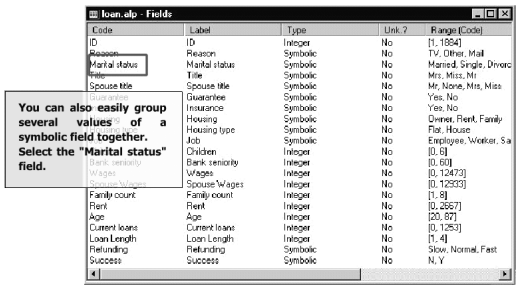
Alice Process ...

Data preparation



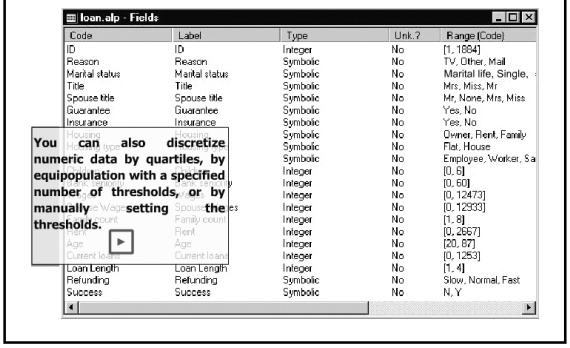
Alice Process ...

Data preparation



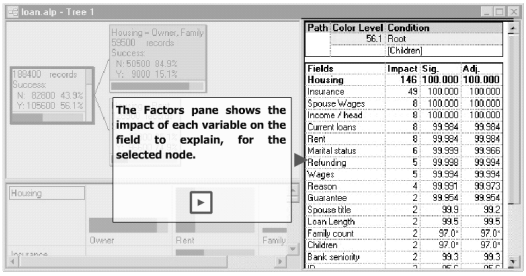
Alice Process ...

Data preparation



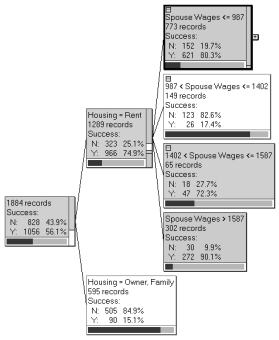
Alice Process ...

Decision tree



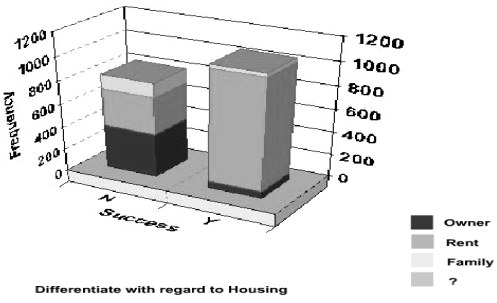
Alice Process ...

Decision tree



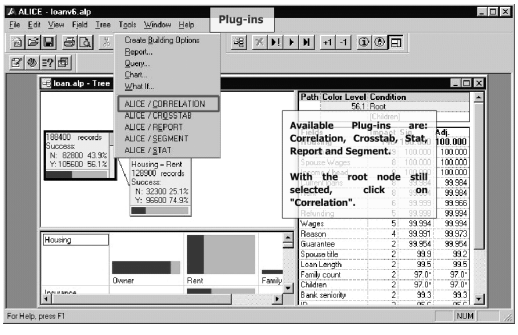
Alice Process ...

Graphics



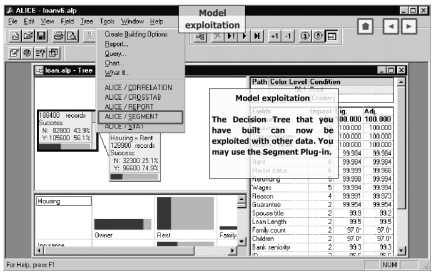
Alice Process ...

Plug-ins



Alice Process ...

Model exploitation



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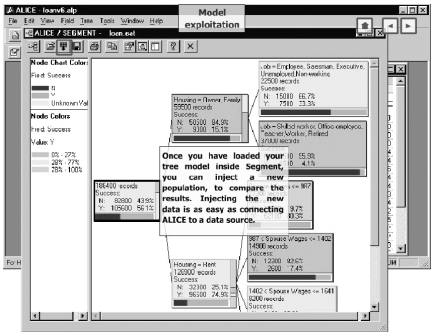

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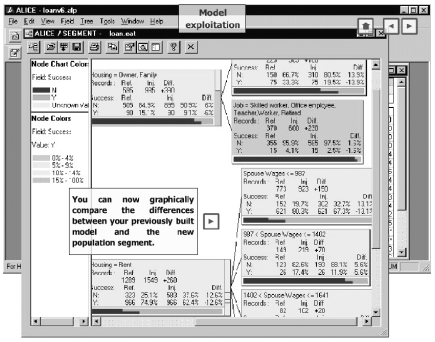

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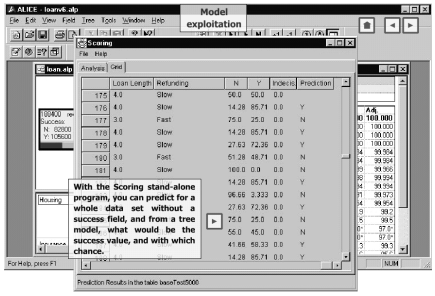

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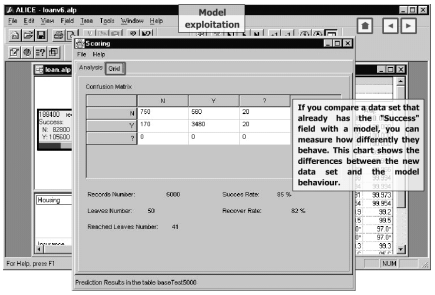

Conclusions

- Powerful and easy to use
- No requirement for advanced computing or statistics background
- User-friendly Interface
- Useful for many different activities

BUT

- No Multi-variables Decision Tree
- Short of Tree Pruning Method
- No Rules Generation

MONEY NEEDED :(Even for Evaluation Demo ...