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(54) Title: ONLINE DATABASE MINING

(57) Abstract

A computer method is provided of online mining of quantitative association rules which has two stages, a preprocessing stage followed by an online rule generation stage. The required computational effort is reduced by the preprocessing stage, defined by preprocessing data to organize the relationships between antecedent attributes to create a hierarchically arranged multidimensional indexing structure. The resulting structure facilitates the performance of the second stage, online processing, which involves the generation of quantitative association rules. The second stage, online rule generation, utilizes the multidimensional index structure created by the preprocessing stage by first finding the areas in the data which correspond to the rules and then uses a merging step to create a merged tree in order to carefully combine interesting regions in order to give a hierarchical representation of the rule set. The merged tree is then used in order to actually generate the rules.

