apriori {arules}   R Documentation

Mining Associations with Apriori

Description

Mine frequent itemsets, association rules or association hyperedges using the Apriori algorithm. The Apriori algorithm employs level-wise search for frequent itemsets. The implementation of Apriori used includes some improvements (e.g., a prefix tree and item sorting).

Usage

```
apriori(data, parameter = NULL, appearance = NULL, control = NULL)
```

Arguments

data	object of class transactions or any data structure which can be coerced into transactions (e.g., a binary matrix or data.frame).
parameter	object of class APparameter or named list. The default behavior is to mine rules with support 0.1, confidence 0.8, and maxlen 5.
appearance	object of class APappearance or named list. With this argument item appearance can be restricted. By default all items can appear unrestricted.
control	object of class APcontrol or named list. Controls the performance of the mining algorithm (item sorting, etc.)

Details

Calls the C implementation of the Apriori algorithm by Christian Borgelt for mining frequent itemsets, rules or hyperedges.

Value

Returns an object of class rules or itemsets.

References

R. Agrawal, T. Imielinski, and A. Swami (1993) Mining association rules between sets of items in large databases. In *Proceedings of the ACM SIGMOD International Conference on Management of Data*, pages 207–216, Washington D.C.

Christian Borgelt and Rudolf Kruse (2002) Induction of Association Rules: Apriori Implementation. *15th Conference on Computational Statistics* (COMPSTAT 2002, Berlin, Germany) Physica Verlag, Heidelberg, Germany.

Christian Borgelt (2003) Efficient Implementations of Apriori and Eclat. *Workshop of Frequent Item Set Mining Implementations* (FIMI 2003, Melbourne, FL, USA).

See Also

APparameter-class, APcontrol-class, APappearance-class, transactions-class, itemsets-class, rules-class

Examples

```
data("Adult")
## Mine association rules.
rules <- apriori(Adult,
                 parameter = list(supp = 0.5, conf = 0.9,
                                  target = "rules"))
summary(rules)
```

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