

Fp growth algorithm

1) Aim: To implement and design apriori algorithm using weka.

Algorithm:

- Determine root node
- Calculate entropy for classes
- Calculate entropy after split for each attributes.
- Calculate information gain
- Perform split
- Perform further split
- Compute fp growth algorithm

Output:

The screenshot displays the Weka Explorer interface with the FPGrowth algorithm applied to the 'supermarket' dataset. The 'Associate' tab is active, showing the command: `FPGrowth -P 2 -I 1 -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0.1`. The 'Result list' on the left shows '2035:12 - FPGrowth'. The 'Associator output' pane displays the following information:

```
==== Run information ====
Scheme:      weka.associations.FPGrowth -P 2 -I 1 -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0.1
Relation:    supermarket
Instances:   4627
Attributes:  217
             (list of attributes omitted)
==== Associator model (full training set) ====

FPGrowth found 16 rules (displaying top 10)

1. [fruit=t, frozen foods=t, biscuits=t, total=high]: 788 ==> [bread and cake=t]: 723 <conf:(0.92)> lift:(1.27) lev:
2. [fruit=t, baking needs=t, biscuits=t, total=high]: 760 ==> [bread and cake=t]: 696 <conf:(0.92)> lift:(1.27) lev:
3. [fruit=t, baking needs=t, frozen foods=t, total=high]: 770 ==> [bread and cake=t]: 705 <conf:(0.92)> lift:(1.27)
4. [fruit=t, vegetables=t, biscuits=t, total=high]: 815 ==> [bread and cake=t]: 746 <conf:(0.92)> lift:(1.27) lev:(0
5. [fruit=t, party snack foods=t, total=high]: 854 ==> [bread and cake=t]: 779 <conf:(0.91)> lift:(1.27) lev:(0.04)
6. [vegetables=t, frozen foods=t, biscuits=t, total=high]: 797 ==> [bread and cake=t]: 725 <conf:(0.91)> lift:(1.26)
7. [vegetables=t, baking needs=t, biscuits=t, total=high]: 772 ==> [bread and cake=t]: 701 <conf:(0.91)> lift:(1.26)
8. [fruit=t, biscuits=t, total=high]: 954 ==> [bread and cake=t]: 866 <conf:(0.91)> lift:(1.26) lev:(0.04) conv:(3)
9. [fruit=t, vegetables=t, frozen foods=t, total=high]: 834 ==> [bread and cake=t]: 757 <conf:(0.91)> lift:(1.26) le
10. [fruit=t, frozen foods=t, total=high]: 969 ==> [bread and cake=t]: 877 <conf:(0.91)> lift:(1.26) lev:(0.04) conv:
```

The bottom status bar indicates 'Status OK' and 'Log' button. The bottom of the screen shows the Windows taskbar with the date '05-02-2023' and temperature '26°C Partly cloudy'.