

Data mining in market basket analysis

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Why need of data mining for every application

- Data from multi-dimensional.
- Planning process
- Prediction and Future trends.
- Solving problem in many application.

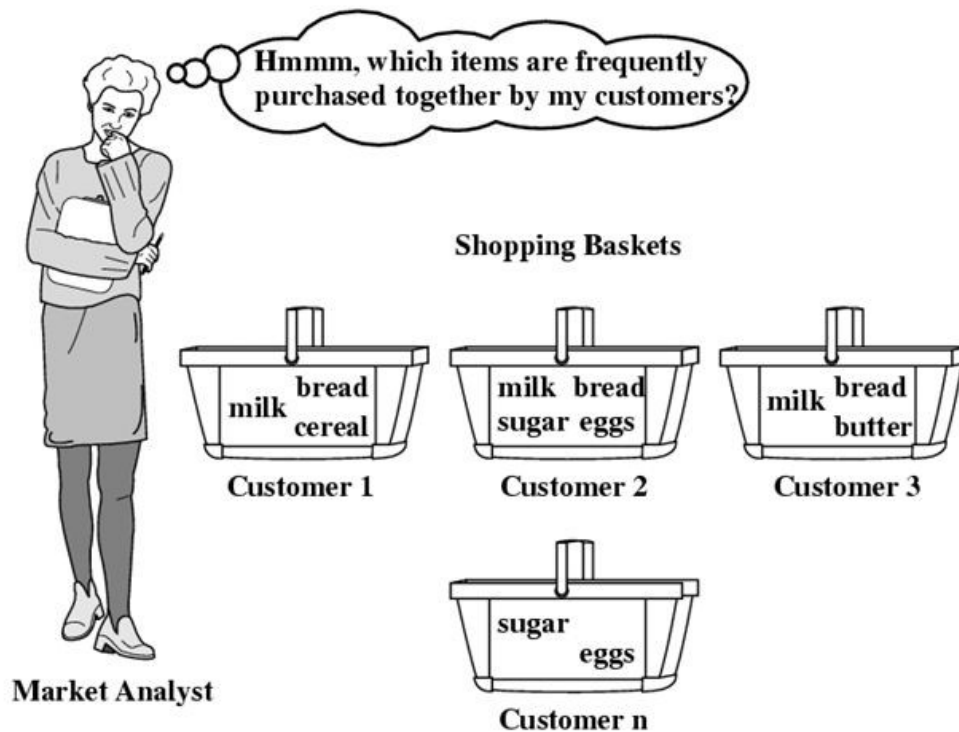


WHAT IS DATA MINING?



what can we define from this pictorial??

Market Basket Analysis



Typically, association rules are considered interesting if they satisfy both a minimum support threshold and a minimum confidence threshold.



What is market basket analysis?

- ❖ Technique based on buying a group item.
- ❖ Kind of problem: what merchandise are customers buying and when?
- ❖ Which products tend to be purchased together and which are amenable to promotion?
 - suggest new store layouts;
 - determine which products to put on special;
 - tie data to individual customers through a loyalty card or website registration.
- ❖ rules can end up merely describing previous marketing promotions;



continue



Apriori Association Rule Mining Algorithm
MATLAB Source Codes



Technique used:

- Data integration
- Classification.
- Association rule
- Affinity analysis
- Visualisation tools
- summarization



Association technique:

- ❑ Point-of-sale transaction data.
- ❑ Three levels of market basket data:
 - customers;
 - orders (purchases, baskets, item sets);
 - items.
- ❑ Track customers over time:
 - average # orders per customer;
 - average # (unique) items per order;
 - proportion of customers purchasing a particular product;
 - average # orders per customer including a particular product;
 - average quantity ordered per customer including a particular product.



Continue:

- ✓ Order characteristics.
- ✓ Item popularity:
 - in a one-item order;
 - in a multi-item order;
 - amongst customers who are repeat purchasers;
- ✓ Tracking marketing interventions.
- ✓ Clustering products by usage—which product in a purchase suggest the purchase of other particular products at the same time:
 - association rules (handfuls of items);
 - cluster analysis (larger sets)



Association rule:

- If a customer buys item A, we expect he/she will also buy item B.
- Actionable
- Trivial
- Inexplicable



Example:

- ❖ Market basket analysis might tell a retailer that customers often purchase shampoo and conditioner together.
- ❖ target customers who buy flour with offers on eggs, to encourage them to spend more on their shopping basket).
- ❖ Combo(meals,electrnics,clothes,etc.)





Thank You!!!

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