

MARKET BASKET ANALYSIS

Q. What is the Objective of a Super Market?

A. Sales improving or Business improving.

★ This Analysis will help in more in terms of how to develop sales in any marketing agency.

Normally, when you go for supermarket to buy bread. Only purchasing bread is your intention. But I am business man, I need to understand your thoughts along with bread what can I suggest or recommend to purchase something else. Ex: Bread with Milk, Bread with Cheese, Bread with Jam...

So, what I will do I put either Milk or cheese or Jam bottle near to the desk of Bread such that it can be visible easily. So, Earlier your intention was purchase to buy only Bread but now it can be changed.

So, our Market basket analysis helps us to put the data in the form of different combinations such that which combination is actually people or interested and looking for.

If a person went for a shopping in super market and purchases some of the items went for billing. The entire shopping for that particular person is one transaction such that I can get daily some hundreds of transactions. So, our Market basket analysis is looking for such patterns/combinations/Associations in that transactions and helping or suggesting to Manager to what the way business to do.

This is also called as **"Association Rules Learning" or "Frequent Item set Mining"**

- ★ To identify the association rules among different items.
There will be no 'Y' variable.

Example:

{ Milk, Sugar } -----> { Bread }

--> If I1 and I2 are purchased then there is likely to purchase I3 as well.

{I1 and I2 } -----> {I3}
{I4 and I5 } -----> {I6, I7}

--> Association Rule Learned from the subset of Item sets.

So, in the above we have two rules, So my job is to find out the relation ship between different patterns and recommend for some more items to purchase and the patterns should be in the form customers interest as well.

To calculate our probabilities we need to follow some measuring Rules to make sure that the pattern should be successful in Real time as well.

Measuring Rules:

- ★ Support
- ★ Confidence
- ★ Lift