5134 - UNIVERSITY COLLEGE OF ENGINEERING KANCHEEPURAM

NAAN MUDHALVAN PROJECT

MARKET BASKET INSIGHTS

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INTRODUCTION

MARKET BASKET INSIGHTS

Market basket insights is a data mining technique used by retailers to increase sales by better understanding customer purchasing patterns.

It involves analyzing large data sets such as,

1. Purchase history

2. To reveal product groupings

3. As well as products that are likely to be purchased together.

OBJECTIVE

The Objective of Market Basket insights is to help predict product sales in specific locations, improving shipping times and warehouse operations.

PROCEDURE

The Apriori algorithm is commonly cited by data scientists in research articles about market basket analysis. It identifies frequent items in the database and then evaluates their frequency as the datasets are expanded to larger sizes.

STEP 1: This step simply scans all of the transactions in order to count the number of occurrences of each item, named it as C1.

STEP 2: Apply minimum support count, and items set that satisfies the condition named as L1. (min support count = 2)

PROCEDURE

STEP 3: To discover the set of frequent 2-itemsets, L2, the algorithm uses the join L1XL1 to generate a candidate set of 2-itemsets, and count the occurrences of each set.

STEP 4: Apply min support count on C2, result will be 2-frequent item set L2.

STEP 5: To generate 2-frequent item set, generate 3-item using L2XL2 and apply min support count which will be 3-frequent item set.

STEP 6: Continue until you get empty sets.

APPLICATIONS

1. Finding items that buyers desire to buy is the major goal of market basket analysis.

2.Market basket analysis may help sales and marketing teams.

3. It develop more effective product placement, pricing, cross-sell, and up-sell tactics.

ADVANTAGES

1. Increasing sales and return on investment.

2. Boosts consumer engagement.

3. Increasing client satisfaction.

4. Aid in improving customer comprehension.

5. Identifies patterns and behavior of customers.

6. Improves marketing initiatives and strategies.

DISADVANTAGES

1.Limited Insight into Causal Relationships: Market basket analysis can only identify relationships between products that are frequently purchased together. It cannot determine the causal relationship between them.

2. Dependence on Data Quality: Poor data quality or incomplete data can lead to inaccurate or incomplete insights. This can ultimately lead to ineffective marketing strategies.

3. Inability to Account for External Factors: Market basket analysis is limited to the data available within a particular data set.

SUMMARIZATION

Market basket analysis.

Discovering frequent items sets.

Applications of frequent items sets.

THANK YOU