

Market Basket Insights

Definition:

Market basket analysis is a technique that helps you discover the patterns and relationships among the products or services that your customers buy. It can help you optimize your marketing, sales, and inventory strategies by identifying the most frequent, profitable, and complementary combinations of items.

Objective:

It consist of analysing the market basket of customers. Thus, the main goal is to find which items are purchased together in their stores. Through the memory, the reader will see how, step by step, the project grows.

Working:

1. Collect data on customer transactions, such as the items purchased in each transaction, the time and date of the transaction, and any other relevant information.
2. Clean and preprocess the data, removing any irrelevant information, handling missing values, and converting the data into a suitable format for analysis.

3. Use association rules mining algorithms such as Apriori or FP-Growth to identify frequent item sets, sets of items often appearing together in a transaction.

4. Calculate the support and confidence for each frequent itemset, which expresses the likelihood of one item being purchased given the purchase of another item.

5. Generate association rules based on the frequent itemsets and their corresponding support and confidence values. Association rules express the likelihood of one item being purchased given the purchase of another item.

6. Interpret the results of the market basket analysis, identifying which items are frequently purchased together, the strength of the association between items, and any other relevant insights into customer behavior and preferences.

Use the insights from the market basket analysis to inform business decisions such as product recommendations, store layout optimization, and targeted marketing campaigns.