Predicting the Frequent Item Sets for Supermarket Data

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Abstract: *This Python notebook uses the Apriori algorithm to analyze datasets from various supermarkets, retail organizations, and minimarkets, resulting in a more accurate analysis of customer behaviour and better product prediction and forecasting. The dataset that is used in this model typically involves customer purchases in supermarkets or any other organization. The datasets contain item details as well as the number of transactions purchased by customers. This model can be used by retailers and supermarkets of all sizes in both urban and rural areas. This algorithm implementation enables accurate forecasting and allows products to be sold efficiently and profitably in stores. Supermarkets, for example, can use the resulting data to forecast future sales volume using a variety of machine-learning techniques. It displays the most frequently purchased items or associated items by the user. This prediction is primarily focused on figuring out the rules of the association. It identifies the set of items or attributes that occur together or frequently in the dataset using association rules. If this apriori model meets a minimum threshold value for support and confidence, it produces a set of items known as a frequent itemset. This Python notebook implements a prediction model based on the apriori algorithm, which improves the efficiency of level-wise generation of frequent item sets by utilizing an important property known as the Apriori property, which aids in reducing the search space.*

Keywords: Dataset, Apriori, Machine learning, prediction, forecasting, confidence, support

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