Clustering Result Report for eCommerce Transactions Dataset

Overview:

This report presents the results of customer segmentation using the KMeans clustering algorithm on the eCommerce transactions dataset. The clustering model aimed to group customers based on their purchasing behaviour and profile information.

Clustering Methodology:

1. Algorithm:
    - KMeans Clustering
2. Number of Clusters:
    - 4 (Four)
3. Features Used:
    - Total Spending
    - Average Quantity per Transaction
    - Number of Transactions
4. Cluster Analysis:
    - Cluster0: High Spenders
        - Characteristics: Frequent, High Value Customers
        - Business Recommendation: Provide exclusive offers and loyalty benefits
    - Cluster1: Moderate Spenders
        - Characteristics: Diverse range of purchases with moderate spending
        - Business Recommendation: Encourage brand loyalty through personalized product recommendations
    - Cluster2: Low Spenders
        - Characteristics: Infrequent transactions with low spending
        - Business Recommendation: Offer special discounts to encourage repeat purchases
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    - Cluster3: New Customers
        - Characteristics: Limited transaction history, recently acquired
        - Business Recommendation: Provide welcome discounts and educational content on product offerings
5. Visual Representation:

    A scatter plot was generated to visualize the clusters based on key features such as total spending and transaction count. The distinct grouping of clusters confirmed the effectiveness of the clustering approach.

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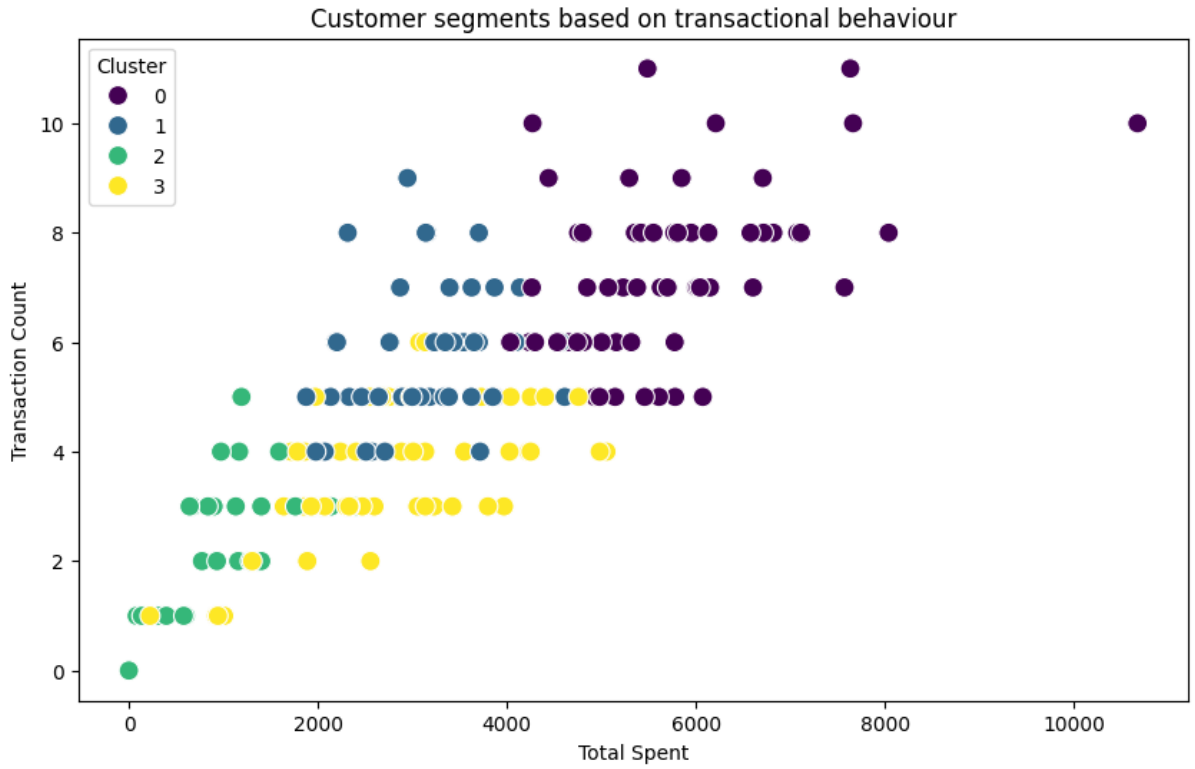

Conclusion:

The clustering model successfully segmented customers into meaningful groups, providing actionable insights to enhance marketing strategies, customer engagement, and overall business performance. Further optimization of cluster numbers and feature selection could improve segmentation accuracy.