Clustering Results Report

Overview of Clustering Analysis

This report summarizes the clustering analysis performed on the eCommerce dataset using customer profile and transaction data. The objective was to segment customers into distinct groups to gain insights for targeted business strategies.

Clustering Results

A total of 4 clusters were formed. The clustering was evaluated using the Davies-Bouldin Index (DB Index) metric.

Sample Clustering Results:

CustomerID: C0001, Cluster: 1

CustomerID: C0002, Cluster: 2

CustomerID: C0003, Cluster: 1

CustomerID: C0004, Cluster: 0

CustomerID: C0005, Cluster: 2

CustomerID: C0006, Cluster: 1

CustomerID: C0007, Cluster: 2

CustomerID: C0008, Cluster: 0

CustomerID: C0009, Cluster: 2

CustomerID: C0010, Cluster: 2

Evaluation Metrics

1. Davies-Bouldin Index (DB Index): A lower value indicates better clustering.

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2. Additional metrics such as Silhouette Score can further validate clustering quality.

3. Visualizations like PCA scatterplots provide a clear view of cluster separations.

Business Insights from Clustering

1. Cluster 0 represents high-value customers with frequent transactions.

2. Cluster 1 includes occasional buyers with moderate spending habits.

3. Cluster 2 shows customers with low transaction volume, indicating potential churn.

4. Cluster 3 highlights new customers with recent transactions.