

# Customer Segmentation Report

## Customer Segmentation Report

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Number of Clusters: 4

Davies-Bouldin Index: 0.75

### Cluster Distribution:

Cluster 0: 35 customers

Cluster 1: 45 customers

Cluster 2: 30 customers

Cluster 3: 40 customers

### Description:

The clustering analysis used K-Means with 4 clusters, determined using the Elbow Method.

The Davies-Bouldin Index of 0.75 indicates a good separation between clusters.

Clusters were visualized using PCA for dimensionality reduction, allowing a clear depiction of customer segments based on transaction behavior and profile data.

### Actionable Insights:

1. Cluster 0 represents high-value customers with frequent transactions; target them with loyalty programs.
2. Cluster 1 consists of average spenders; focus on upselling opportunities.
3. Cluster 2 includes occasional buyers; re-engage with promotional campaigns.

4. Cluster 3 represents low-value customers; analyze their inactivity for potential retention strategies.