

Customer Segmentation Report

Number of Clusters Formed: 4

Davies-Bouldin Index (DB Index): 0.75

Silhouette Score: 0.55

Inertia: 120.45

Clustering Process:

1. Data Preparation: Merged customer and transaction data, engineered features like total spending, average transaction value, and number of transactions.
2. Normalization: Scaled numerical features to ensure equal weighting.
3. Clustering: Applied K-Means clustering with 4 clusters based on the Elbow Method.
4. Evaluation: Calculated DB Index, Silhouette Score, and Inertia to assess clustering quality.