

Number of Clusters Formed

The K-means algorithm was applied with a predefined number of 4 clusters. The results confirm that 4 distinct clusters were indeed formed in the customer segmentation process.

DB Index Value

The Davies-Bouldin (DB) Index, which measures the average similarity between each cluster and its most similar cluster, was calculated. A lower DB Index indicates better cluster separation. For this clustering:

DB Index = 0.757

This relatively low value suggests good cluster separation and compact clusters.

Other Relevant Clustering Metrics

In addition to the DB Index, the Silhouette Score was calculated as another measure of clustering quality:

Silhouette Score = 0.551

The Silhouette Score ranges from -1 to 1, where higher values indicate better-defined clusters. While positive, this score suggests there may be some overlap between clusters, but the overall structure is still meaningful.

These metrics together provide a comprehensive view of the clustering quality, indicating a reasonable segmentation of customers based on their features.