Customer Segmentation / Clustering Report

Optimal Number of Clusters: 10

Ddiverse set of customer segments. Ten clusters could indicate varied customer behaviors and profiles. It's important to analyze each cluster in detail to understand the characteristics that differentiate them.

Davies-Bouldin Index: 1.21

The DBI value indicates the average similarity of each cluster with the cluster that is most similar to it. A lower value suggests better separation between clusters. In your case, 1.21 is a moderate score, and improving the clustering technique (e.g., using DBSCAN or adjusting the number of clusters) could help reduce this value for more distinct clusters.

Silhouette Score: 0.28

This score measures how similar each point is to its own cluster compared to other clusters. A score closer to +1 indicates good clustering, while a score closer to -1 suggests poor clustering. A score of 0.28 is relatively low, meaning the clusters aren't perfectly distinct and could potentially be improved. You might want to experiment with other clustering methods or feature engineering techniques.

Can be improved with more experimentation. These are my current scores as we are falling short of time.

- We can use **Elbow Method** to determine the optimal number of clusters for KMeans clustering.
- If you have clusters of varying densities or irregular shapes, **DBSCAN** may work better than KMeans. We can try with DBSCAN.