

# Customer Segmentation Clustering Results

1. Number of Clusters Formed: After applying KMeans clustering, the optimal number of clusters formed was 3. This number was selected based on the evaluation of different clustering metrics and the Davies-Bouldin (DB) index.
2. DB Index Value: The Davies-Bouldin Index for the clustering results is 0.94. A lower DB index value indicates that the clusters are well-formed with minimal overlap.
3. Other Clustering Metrics: The clusters show distinct characteristics based on customer profile and transaction history. Customers in different clusters differ significantly in their average transaction value and frequency, indicating successful segmentation.
4. Visualization: The clusters have been visualized using a scatter plot, where customers are separated based on their total transaction value and the number of transactions. The plot highlights the boundaries of each cluster, demonstrating the differences between customer segments.
5. Interpretation: The three clusters represent distinct customer types: high-value frequent buyers, moderate buyers, and low-value occasional buyers. Targeted marketing strategies can be developed for each of these groups to improve engagement and drive revenue.