

1. **Number of Clusters Formed:**

- Four clusters were formed based on customer spending, quantity purchased, and average product price.

2. **DB Index Value:**

- The Davies-Bouldin Index is **0.55**, indicating well-defined clusters with low intra-cluster variance.

3. **Silhouette Score:**

- The Silhouette Score is **0.54**, demonstrating that the clusters are moderately well-separated.

4. **Visual Representation:**

- A scatter plot was created using PCA to visualize the clusters in 2D space, showing distinct groupings of customers based on their behavior.

5. **Insights:**

- Cluster 0 represents customers with low spending and low purchase frequency.
- Cluster 1 includes high-spending customers with frequent purchases, suggesting they are VIPs or loyal customers.
- Cluster 2 groups customers who primarily purchase low-priced products in bulk.
- Cluster 3 highlights customers with mid-level spending and average frequency.