Customer Segmentation Report

1. Number of Clusters Formed

The clustering algorithm identified **5 clusters** based on customer profiles and transaction data.

2. Evaluation Metrics

- **Davies-Bouldin Index (DB Index): 0.8524813520458038**
  - A lower DB Index indicates better clustering performance.
- **Silhouette Score: 0.3535127066812944**
  - A higher silhouette score suggests that the clusters are well-separated and compact.

3. Cluster Insights

- **Cluster 0:** (Describe based on transaction volume, spending habits, or region trends)
- **Cluster 1:** (Similar details)
- **Cluster 2:** (Similar details)
- **Cluster 3:** (Similar details)

4. Visualization

The **PCA plot** illustrates the distribution of customers within the identified clusters. Customers with similar transaction behaviors and profile attributes are grouped together.