

Customer Segmentation Report

Clustering Metrics

Silhouette Score: 0.46: Indicates moderate cluster separation and cohesion. A score closer to 1 would suggest better-defined clusters.

Davies-Bouldin Index: 0.95: A lower DB Index indicates better clustering. The value of 0.99 suggests reasonably distinct clusters.

Cluster Profiles:

Cluster	Total Expenditure	Frequency	Recency (Days)	Asia (%)	Europe (%)	North America (%)	South America (%)
0	3325.09	4.68	105.88	0.0	100.0	0.0	0.0
1	3717.84	5.15	93.63	0.0	0.0	0.0	100.0
2	3311.16	5.30	115.15	0.0	0.0	100.0	0.0
3	3456.25	4.95	106.00	100.0	0.0	0.0	0.0

Insights

- Cluster 0 (European Customers with Moderate Spending):**
 - Average expenditure: \$3325.09.
 - Transaction frequency: Moderate (4.68 transactions).
 - Recency: 105.88 days since the last transaction.
 - All customers in this cluster are from Europe (**100%**).
- Cluster 1 (South American Customers with Moderate Spending):**
 - Average expenditure: \$3717.84.
 - Transaction frequency: Moderate (5.15 transactions).
 - Recency: 93.63 days since the last transaction.
 - All customers are from South America (**100%**).
- Cluster 2 (North American Customers with Moderate Spending):**
 - Average expenditure: \$3311.16.
 - Transaction frequency: Moderate to high (5.30 transactions).
 - Recency: 115.15 days since the last transaction.
 - All customers are from North America (**100%**).
- Cluster 3 (Asian Customers with Moderate Recency):**
 - Average expenditure: \$3456.25.

- **Transaction frequency:** Moderate (4.95 transactions).
- **Recency:** 106.00 days since the last transaction.
- All customers are from Asia (**100%**).

Conclusions

1. **Cluster 0 (European Customers with Moderate Spending):**
 - These customers have moderate spending and transaction frequency.
 - **Recommendation:** Offer region-specific discounts or promotions to increase transaction frequency and spending.
2. **Cluster 1 (South American Customers):**
 - Customers from South America exhibit moderate spending and transaction frequency but have the lowest recency value (**93.63 days**).
 - **Recommendation:** Focus on retention strategies for this cluster and consider campaigns highlighting South American cultural preferences.
3. **Cluster 2 (North American Customers):**
 - These customers show moderate spending and slightly higher transaction frequency (**5.30 transactions**). However, their recency value is the highest (**115.15 days**).
 - **Recommendation:** Deploy re-engagement campaigns to reactivate these customers and encourage them to transact more frequently.
4. **Cluster 3 (Asian Customers):**
 - Asian customers have moderate spending and recency, indicating they are somewhat active but not frequent.
 - **Recommendation:** Use targeted re-engagement strategies and exclusive region-based offers to retain this segment.

Recommendations

1. **Personalized Marketing:**
 - Use the unique characteristics of each cluster to design tailored marketing campaigns. For example, offer loyalty programs to regions with moderate spending (e.g., North America and Asia).
2. **Re-Engagement Campaigns:**
 - Focus on clusters with high recency values (e.g., Cluster 2 and Cluster 3) to reactivate inactive customers and encourage frequent purchases.
3. **Retention Strategies:**
 - Build loyalty programs targeting high-potential regions like Europe (Cluster 0) and South America (Cluster 1) to ensure consistent engagement.
4. **Localized Campaigns:**
 - Leverage regional preferences to design region-specific campaigns, especially for South America and North America.
5. **Seasonal Offers:**
 - Use seasonal or holiday-specific promotions to boost recency and encourage purchases across all regions