

Customer Segmentation/Clustering

Clustering is performed considering both customer's personal as well as transaction details.

- **Region:** Customers from the same region are grouped together.
- **Signup Date:** Customers are classified as New or Old based on date '2024-01-01'.
- **Average Total Value:** Average value of all transactions made by a customer.
- **Recency:** Date of the customer's most recent transaction.
- **Categories:** Product categories that identify customers with similar interests.

Clustering Results:

Number of Clusters: 4

DB Index: 1.36

Silhouette Score: 0.24

Breakdown of Clusters:

- **Cluster 1** (High TotalValue, High Recency): This cluster represents high-value customers who make frequent purchases.
- **Cluster 2** (Low TotalValue, High Recency): This cluster consists of customers who spend less and made recent purchases.
- **Cluster 3** (Moderate TotalValue, Moderate Recency): This cluster represents a group of moderate customers with average purchase frequency.
- **Cluster 4** (Low TotalValue, Low Recency): This cluster includes customers with low spending and infrequent purchases.