

Customer Segmentation Report

Overview

Customer segmentation was performed using clustering techniques. The dataset was aggregated to create customer profiles based on their total revenue and purchase quantities.

Methodology

- Data Aggregation: Customer profiles were created by grouping transactions by CustomerID.
- Feature Scaling: StandardScaler was used to normalize the features.
- Clustering Algorithm: K-Means clustering was applied to segment customers into 4 distinct groups.
- Dimensionality Reduction: PCA was used to visualize clusters in 2D space.

Results

- Four customer segments were identified: -
 1. High-value, frequent purchasers.
 2. Moderate-value, occasional buyers.
 3. Low-value, infrequent buyers.
 4. New or inactive customers.
- PCA visualization shows distinct separations between clusters.
- Cluster profiles provide actionable insights for targeted marketing strategies.

Actionable Insights

- High-value customers can be engaged through loyalty programs and personalized offers.
- Moderate-value buyers may respond well to upselling and cross-selling campaigns.
- Low-value customers could benefit from re-engagement strategies.
- New customers should be nurtured with onboarding offers and introductory discounts.

Conclusion

The clustering results highlight distinct customer segments, allowing for tailored marketing strategies. These insights can drive improved customer retention, satisfaction, and overall revenue.