Snapdeal Menternship Project

Customer Segmentation Report

Customer Segmentation Report using K-Means Clustering and PCA

Executive Summary

Snapdeal's customer segmentation project uses K-Means clustering and PCA to reveal four strategic customer groups. This version includes data visualizations and key business recommendations.

Challenge

How can Snapdeal personalize experiences and drive growth using its customer data?

Approach

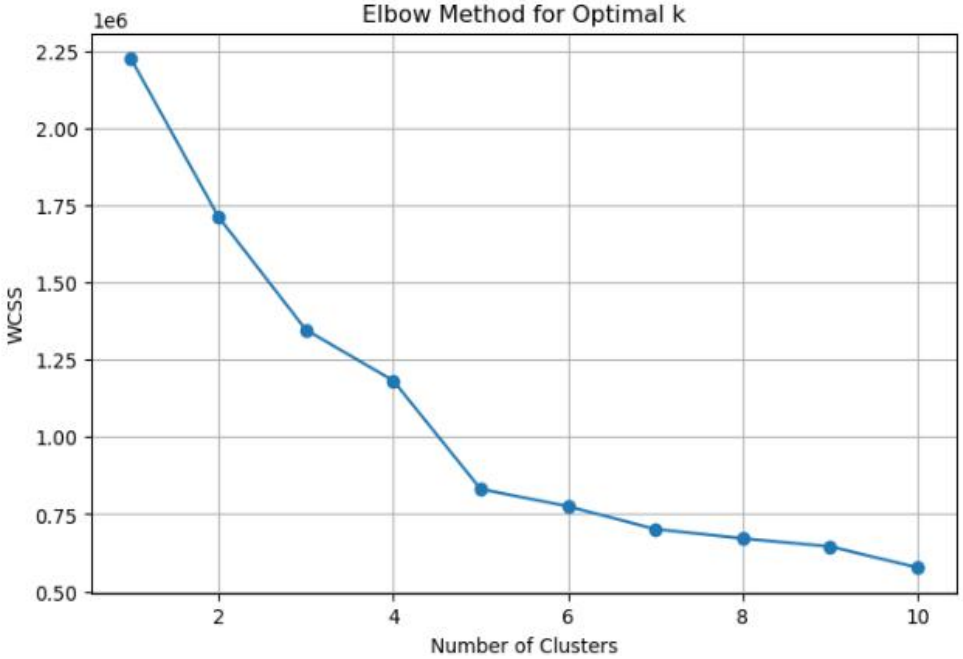
Clean and preprocess transaction data

Feature selection and scaling

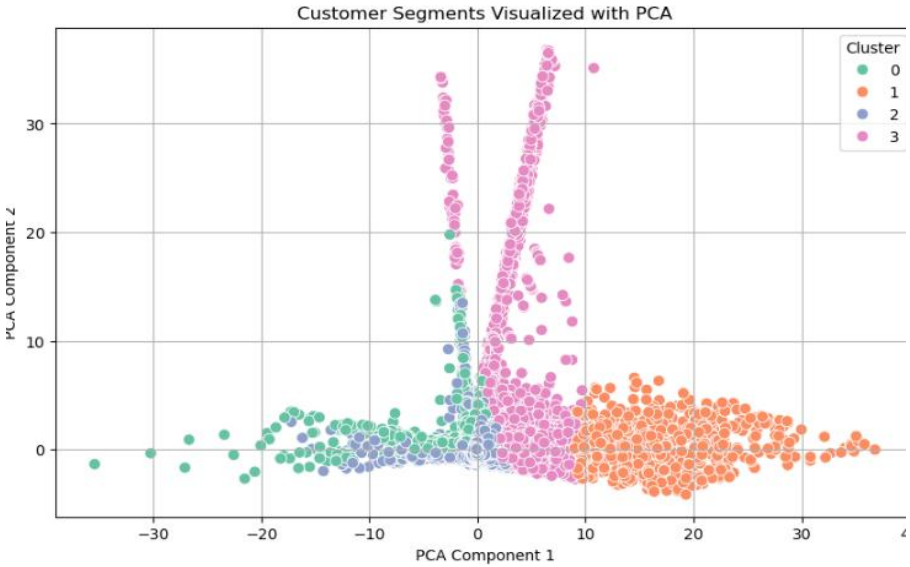
PCA to visualize structure

K-Means clustering (Elbow method confirms k=4)

Visual Insights



- Elbow Method to Determine Optimal Clusters
- The Elbow curve (below) shows that k = 4 is optimal, balancing cluster separation and WCSS.



PCA: Visualizing Customer Clusters

PCA reduces data to 2D to reveal natural customer clusters. Clusters 1 and 3 are well-separated, confirming business distinctions.

Cluster Summary & Strategic Recommendations

Cluster	Customer Type	Traits	Recommendation
0	Standard Buyers	Low spend, frequent buyers	Cross-sell bundles and essentials
1	Bulk Buyers	High volume, price-sensitive	Volume discounts, repeat order scheduling
2	Mid Spenders	Balanced purchase behavior	Personalized bundles, occasional upselling
3	Premium Buyers	High spend, quality-conscious	VIP programs, early access to sales

Conclusions

The customer segmentation project empowers Snapdeal to deliver personalized, data-driven experiences. By leveraging K-Means clustering and PCA, Snapdeal can identify distinct customer groups, tailor strategies to their behaviors, and drive measurable growth through targeted engagement.

Thank you!