

# MegaMart Customer Segmentation Analysis – Executive Summary

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## 1 Business Problem

MegaMart currently lacks a formal customer segmentation framework, resulting in broad, undifferentiated marketing efforts, inefficient promotional spending, and limited personalization. This leads to missed opportunities to retain high-value customers and reactivate low-engagement groups. Project Objective: Analyze 3,000 customers using 9 behavioral variables to identify natural behavioral segments and deliver actionable insights for targeted marketing, improved retention, and optimized resource allocation.

### 1.1 High-Value Loyalists (Cluster 0)

These customers represent the highest-value segment. They shop frequently, spend far above average, and exhibit strong browsing activity. They also show long tenure and very low return rates. Key behaviors: very high spend, high purchase frequency, large baskets, high product exploration, strong loyalty, low recency.

### 1.2 Deal-Driven Inactive Shoppers (Cluster 1)

This is the lowest-spending group, marked by minimal engagement and limited browsing activity. They have high recency and low tenure, indicating infrequent or inconsistent purchasing behavior. Key behaviors: low spend, low engagement, price sensitivity, high recency, light browsing.

### 1.3 Mid-Value Occasional Buyers (Cluster 2)

These customers make moderate-value purchases with relatively large basket sizes. Their engagement is balanced and their tenure is stable, though their recency is higher than average. Key behaviors: moderate spend,

large baskets, occasional purchases, medium engagement, stable tenure.

### 1.4 Engaged Browsers with Moderate Spend (Cluster 3)

This segment is characterized by high browsing and session duration, coupled with moderate spending levels. They are active and engaged, with good recency and low return rates, yet they do not convert at high volumes. Key behaviors: high browsing, long sessions, moderate spend, low returns, consistent activity.

### 1.5 Newly Engaged High-Exploration Users (Cluster 4)

This segment was uncovered only when using  $k = 5$ . These customers show very high browsing intensity and long session durations but make very few purchases and exhibit high recency and higher return rates. Their behavior resembles exploratory or early-stage users. Key behaviors: very low spend, minimal transactions, high product exploration, long session durations, high recency, inconsistent conversion.

## 2 Marketing Strategy Recommendations

### 2.1 Segment 0 — High-Value Loyalists

- VIP or premium loyalty program with exclusive rewards and early product access.
- Personalized cross-sell and upsell recommendations based on browsing and historical purchases.
- Priority customer support and high-touch retention initiatives.

**Resource Priority:** Highest — core revenue drivers with strong loyalty stability.

## 2.2 Segment 1 — Deal-Driven Inactive Shoppers

- Discount-oriented campaigns (weekly promotions, bundles, limited-time offers).
- Reactivation tactics such as welcome-back coupons or shipping-based incentives.
- Price-optimized communication to match their high sensitivity to discounts.

**Resource Priority:** Medium — large segment size but lower purchase frequency.

## 2.3 Segment 2 — Mid-Value Occasional Buyers

- Frequency-boosting incentives (“Make two purchases this month and receive 15% off next order”).
- High-value bundles and category-specific promotions.
- Seasonal or event-based targeting to increase purchase likelihood.

**Resource Priority:** High — strong potential to transition into top spenders.

## 2.4 Segment 3 — Engaged Browsers with Moderate Spend

- AI-driven recommendations based on detailed browsing behavior.
- Limited-time offers to convert browsing activity into completed purchases.
- Personalized deals for the categories they explore most frequently.

**Resource Priority:** Medium-High — high engagement and strong upsell potential.

## 2.5 Segment 4 — Newly Engaged High-Exploration Users

- Onboarding campaigns to guide first or early purchases (e.g., “Your first order ships free”).
- Curated product recommendations based on long session durations and high exploration.
- Conversion-focused incentives such as starter bundles or beginner-friendly offers.

**Resource Priority:** Medium — high exploration but inconsistent conversion, strong long-term potential.

## 3 Expected Business Impact

Implementing segment-based marketing is projected to deliver significant benefits:

- **Retention uplift:** Targeted campaigns for High-Value Loyalists could reduce churn by 20–25%.
- **Email performance gains:** Personalized campaigns may increase open rates by 40% and conversion rates by 15–20%.
- **Revenue growth:** Increasing purchase frequency in Segments 2 and 3 could add substantial incremental revenue.
- **Marketing efficiency:** Reduced spend on low-value customers and improved targeting precision lead to better ROI.

### 3.1 Trade-offs & Considerations

- Loyalty programs require investment; however, they pay off through long-term retention.
- Over-marketing Segment 1 may yield low returns due to price sensitivity.
- Deployment requires CRM integration and automated campaign orchestration.

## 4 Next Steps & Recommendations

### 4.1 Immediate Actions

- Deploy the K-Means segmentation model ( $k = 5$ ) into MegaMart’s CRM.
- Begin A/B testing of segment-specific vs. generic campaigns.

### 4.2 Future Enhancements

Integrate product category preferences to enable deeper personalization, while tracking segment migration to identify customers shifting toward higher-value behaviors. Additionally, incorporate lifetime value (LTV) and RFM metrics to strengthen prioritization, and utilize real-time browsing behavior to support dynamic, adaptive segmentation.

## 5 Link del video

Link del video <https://youtu.be/x5FcHP6Vylg>