

Capstone Project: Gift Wonder Customer Segmentation

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Problem Identification

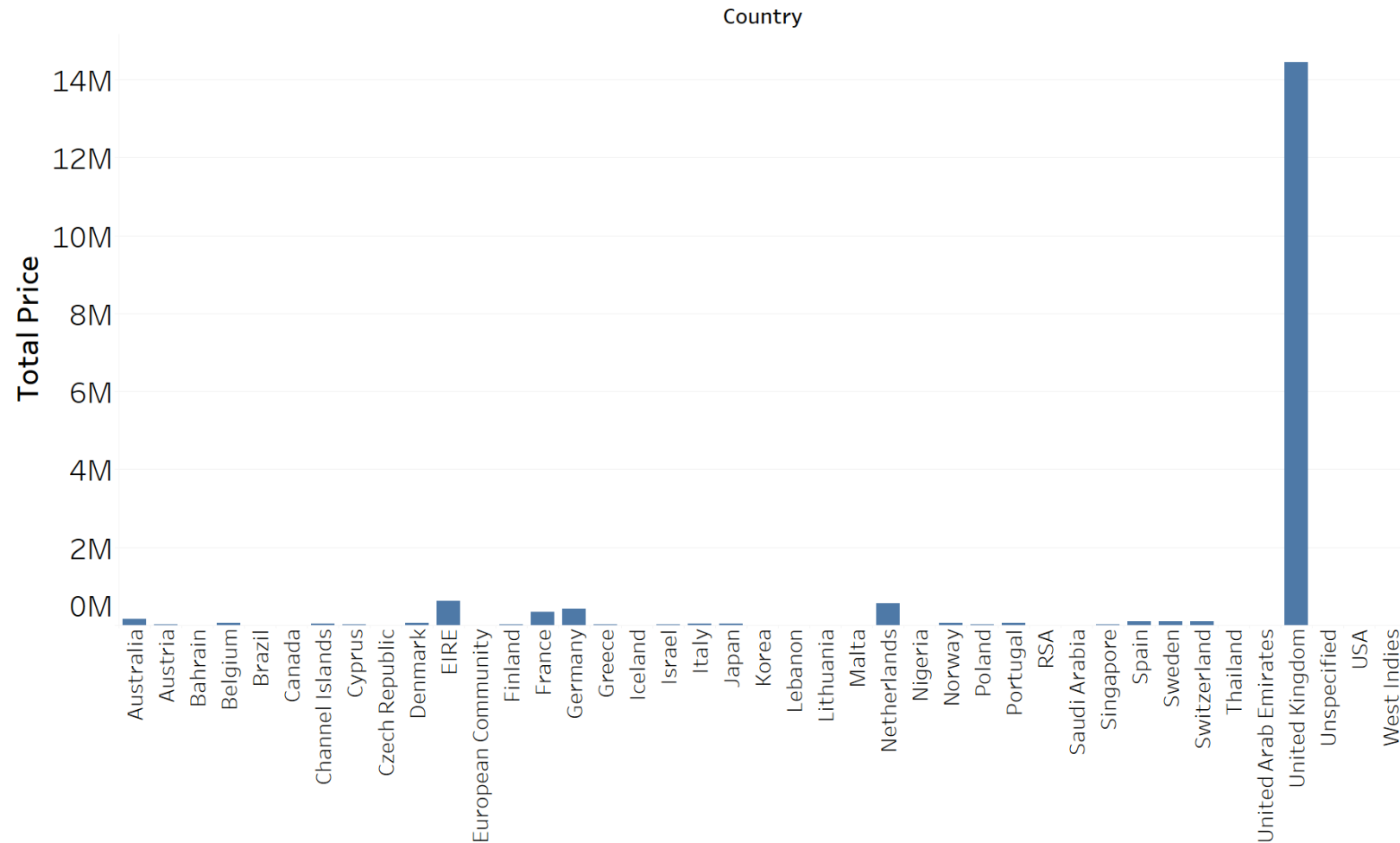
- Gift Wonder, an UK-based online retail company, specializes in selling unique gift items for various occasions
- A significant portion of its customers being wholesalers
- The company is interested in identifying various customer segments for more targeted business strategies to increase the company's revenue

The Big Question

How can Gift Wonder effectively identify customer segments based on their spending behaviors to optimize targeted marketing strategies and maximize revenue?

Exploratory Data Analysis

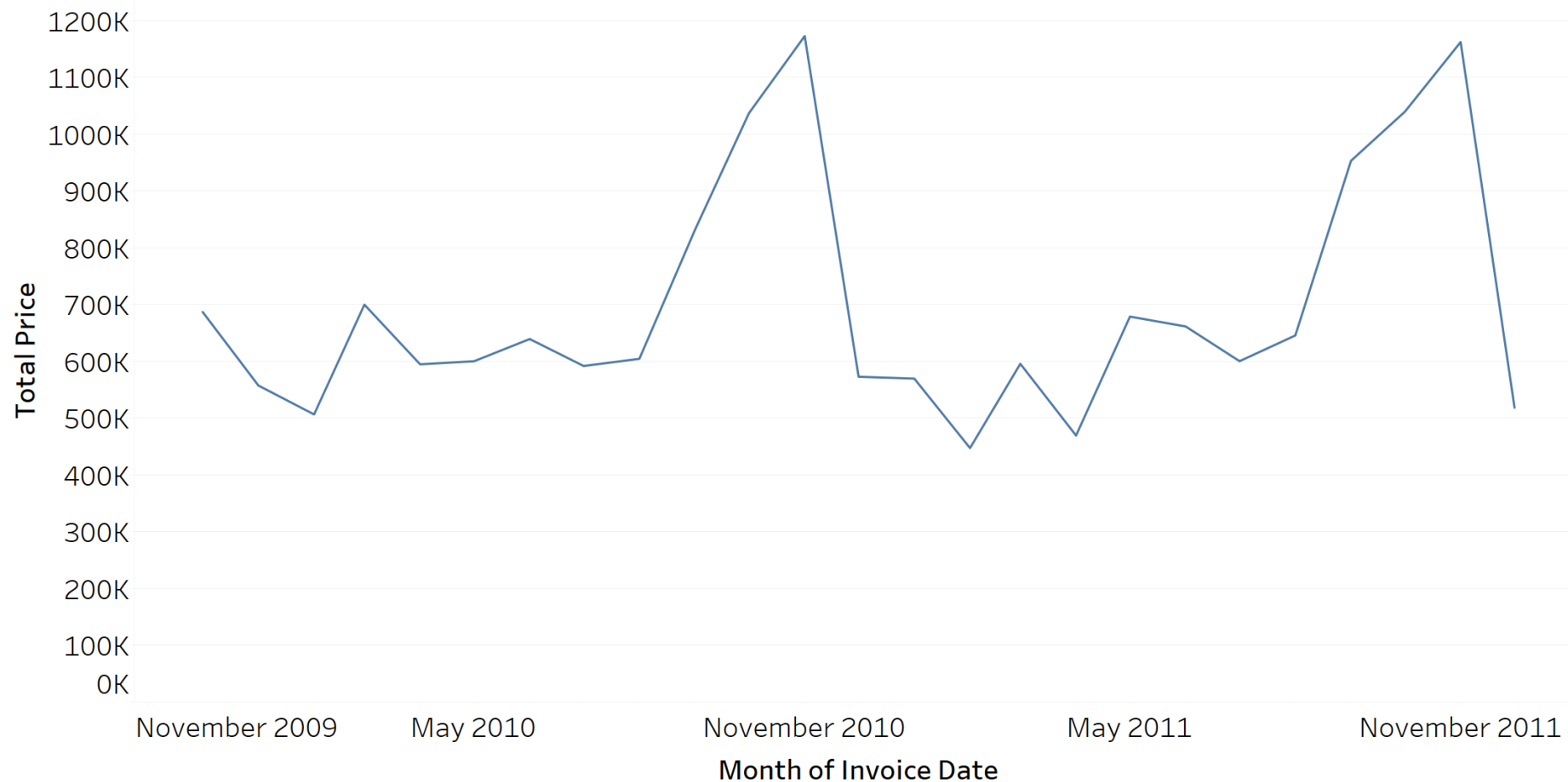
Revenue by Country



Most of the company's revenue comes from the United Kingdom

Exploratory Data Analysis

Revenue by Year Month



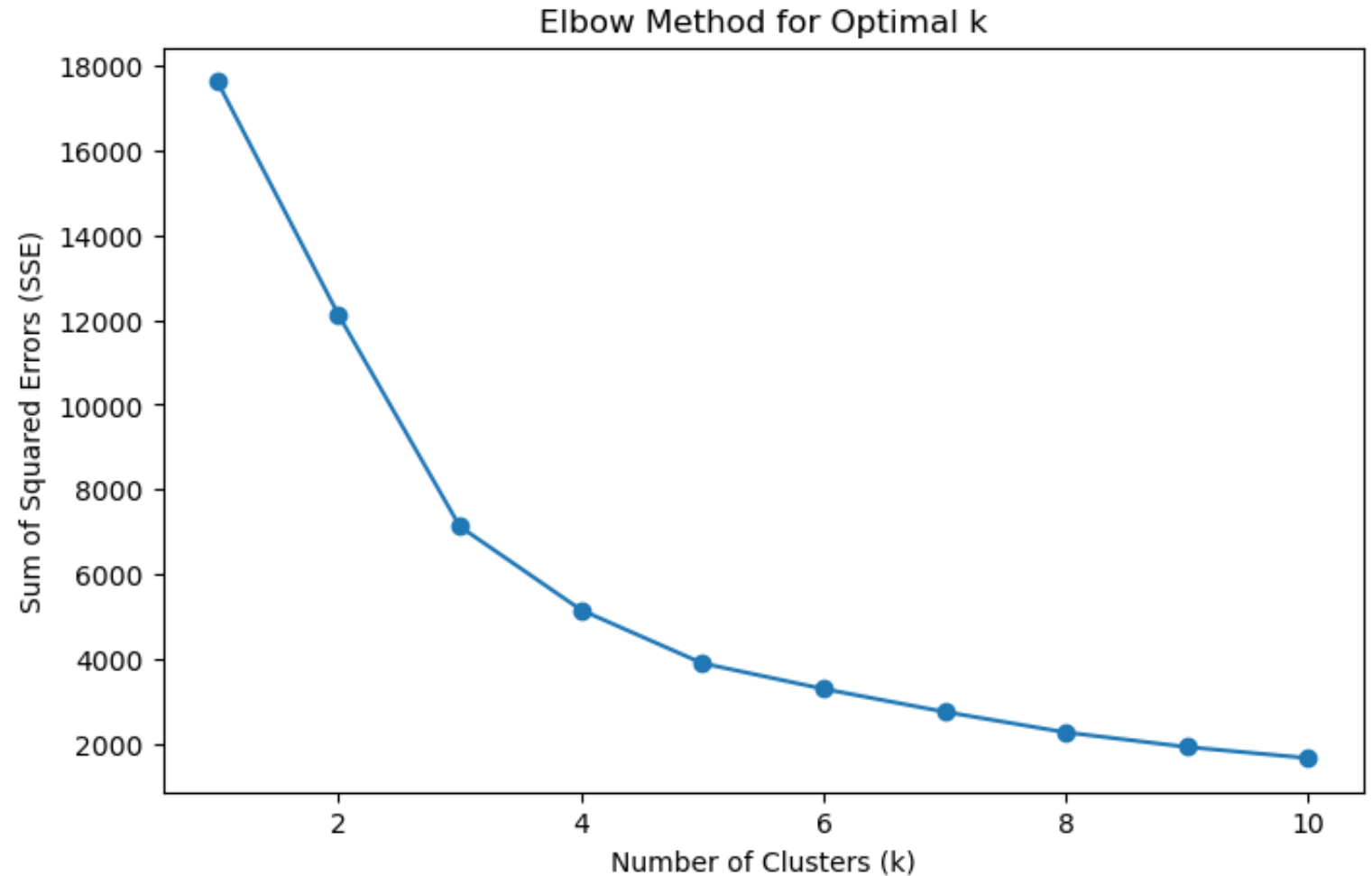
Revenue is highest during September, October, and November

Data Preprocessing and Feature Engineering

- Generate recency, frequency, and monetary value (RFM) variables for customer segmentation
- **Recency** -- the number of days passed since the last purchase during the two-year period
- **Frequency** -- the total number of purchases made during the two-year period
- **Monetary Value** -- the total amount of money a customer spent during the two-year period
- RFM variables were standardized (using z-scores) to ensure feature comparability

Modeling

- K-Means Clustering
- The optimal number of clusters (k) is 5



Five Customer Segments

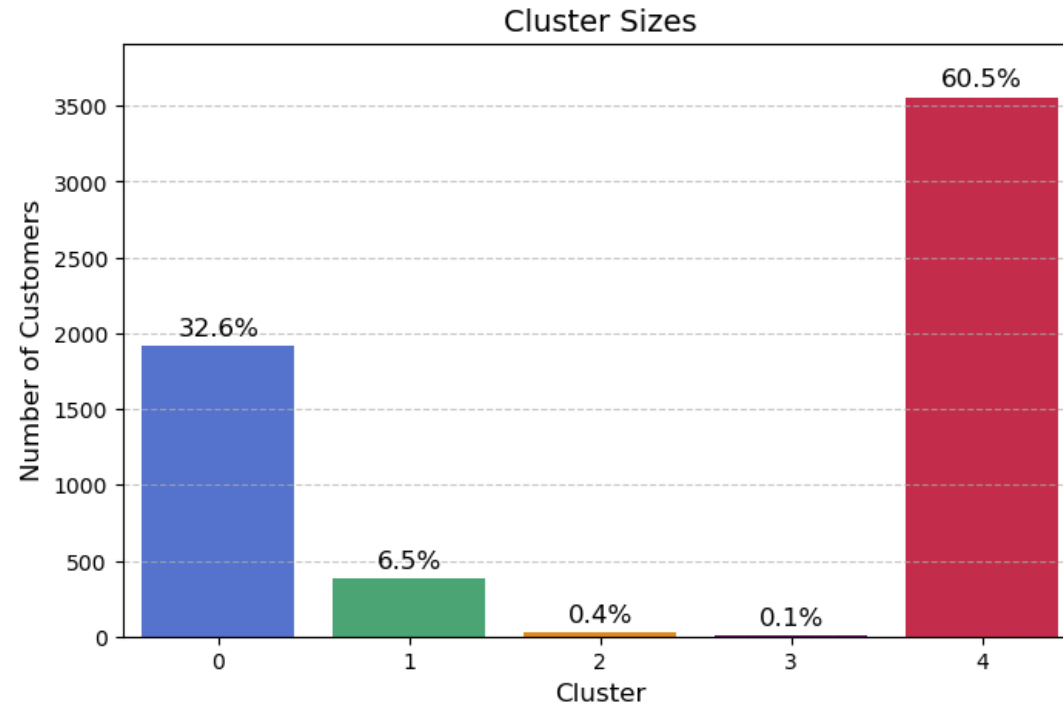
Cluster 0: Lost Low-Value Customers (N = 1914)

Cluster 1: Recent Low-Value Recurrent Customers (N = 380)

Cluster 2: Recent Moderate-Value Recurrent Customers (N = 24)

Cluster 3: Very Recent High-Value Recurrent Customers (N = 4)

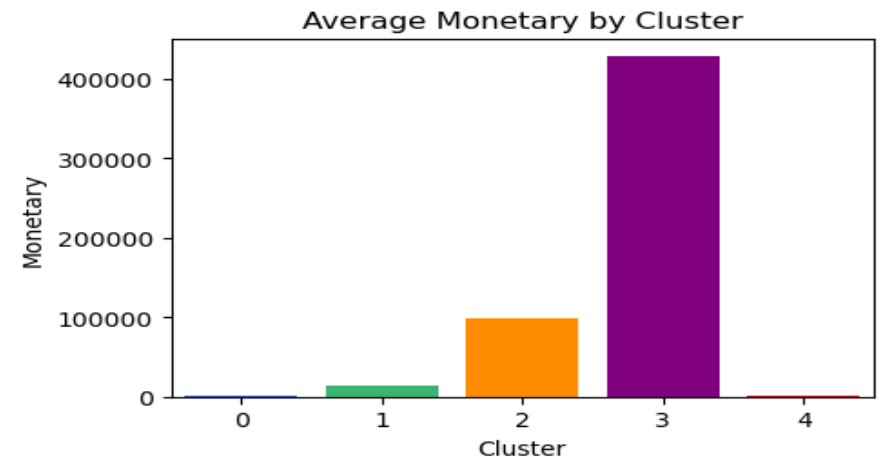
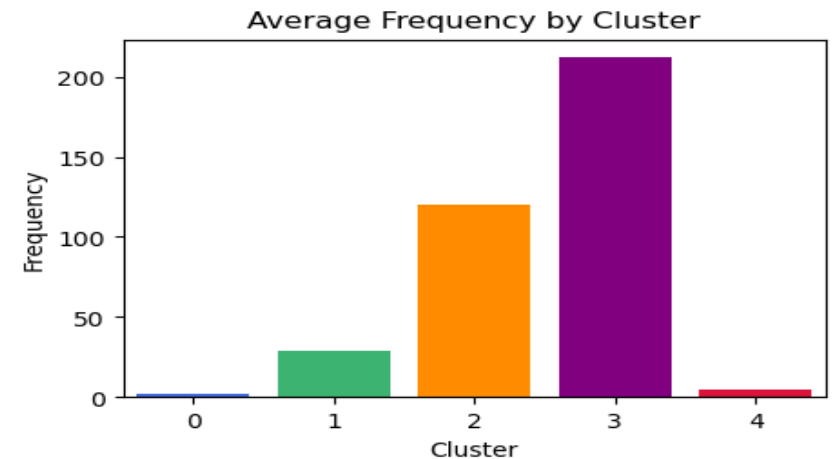
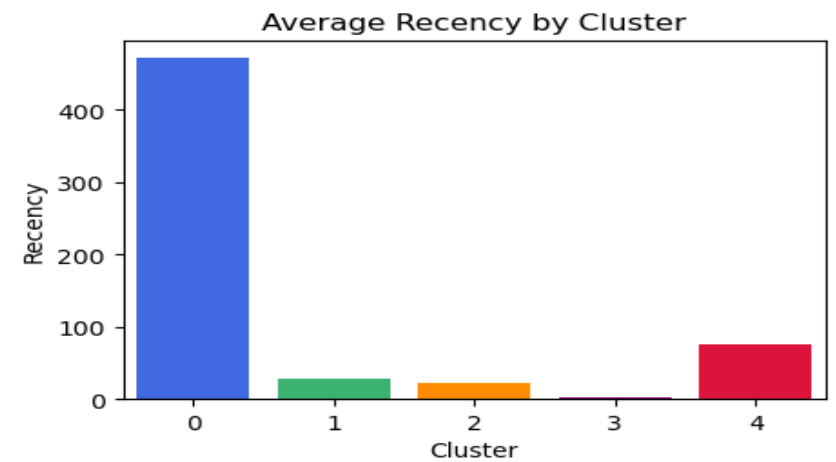
Cluster 4: Infrequent Low-Value Customers (N = 3556)



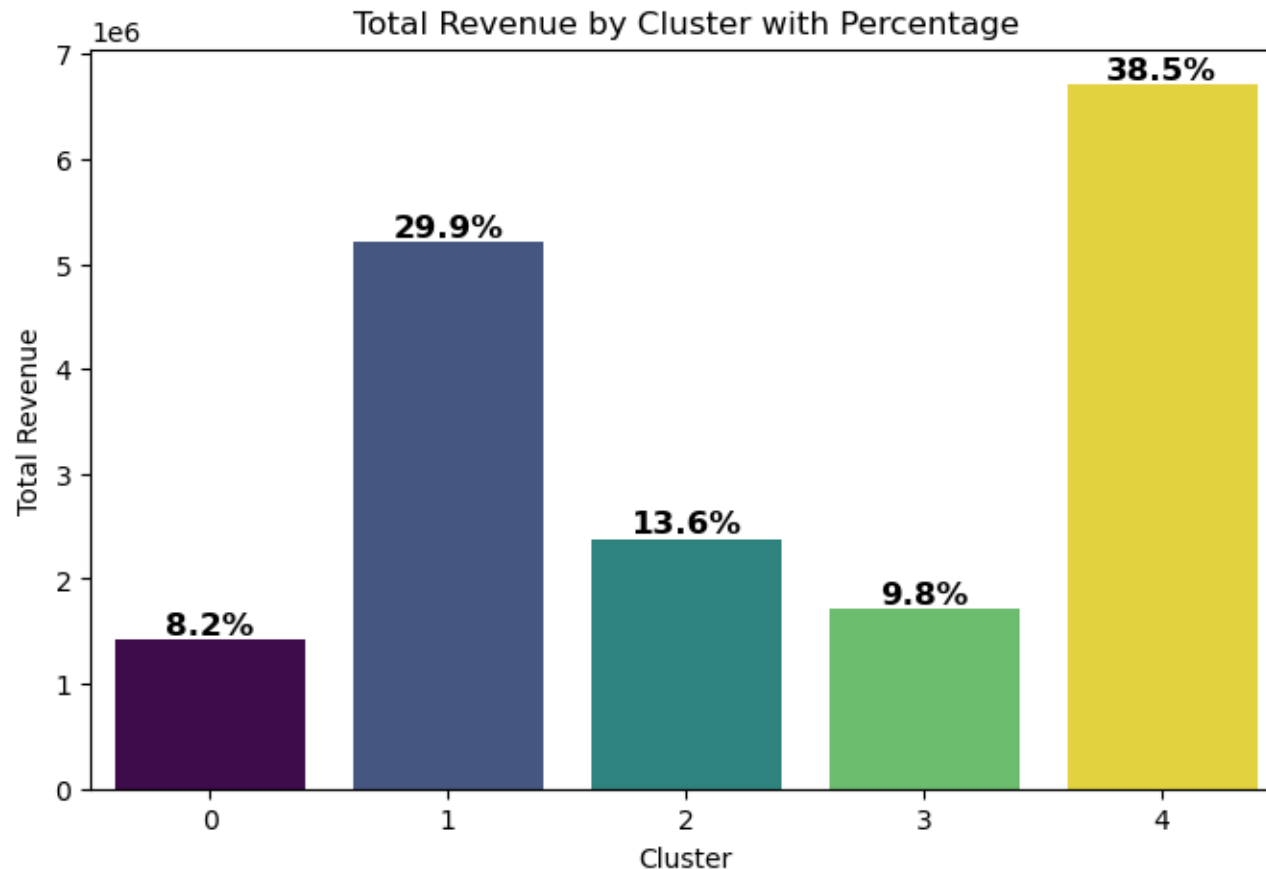
Five Customer Segments: Spending Behaviors

- 0:** Lost Low-Value Customers (N = 1914)
- 1:** Recent Low-Value Recurrent Customers (N = 380)
- 2:** Recent Moderate-Value Recurrent Customers (N = 24)
- 3:** Very Recent High-Value Recurrent Customers (N = 4)
- 4:** Infrequent Low-Value Customers (N = 3556)

Note: More recent customers have lower recency value.



Five Customer Segments: Relative Revenue Contribution



- **High- and Moderate-Value Customers (Clusters 2 & 3)**, despite comprising just 0.47% of all customers, contributed 23.4% of total revenue.
- **Recent & Infrequent Low-Value Customers (Clusters 1 & 4)**, making up 67% of customers, generated 68.4% of total revenue.
- **Lost Low-Value Customers (Cluster 0)** accounted for 8.2% of total revenue.



Recommendations

Segment-Specific Recommendations

High-Priority Segments: Maximizing Revenue from High-Value Customers

- **Cluster 3: Very Recent High-Value Recurrent Customers (N = 4, 0.07%)**
 - These customers have very high spending and recent purchases, making them the most valuable.
- **Recommendations:**
 - **Exclusive VIP Program:** Offer personalized incentives, early access to new products, and exclusive discounts to maintain their loyalty.
 - **Personalized Outreach:** Assign a dedicated account manager or send personalized emails with customized product recommendations.

Segment-Specific Recommendations

- **Cluster 2: Recent Moderate-Value Recurrent Customers (N = 24, 0.40%)**
 - This segment spends a significant amount but is smaller in size. They have made recent purchases, showing potential for long-term retention.
- **Recommendations:**
 - **Targeted Upselling & Bundling:** Offer product bundles and discounts on bulk purchases to encourage increased spending.
 - **Post-Purchase Engagement:** Send follow-up emails with discounts on their next purchase and personalized gift recommendations.
 - **Subscription-Based Model:** Encourage them to sign up for a VIP membership or subscription box with exclusive perks.

Segment-Specific Recommendations

Growth Opportunity Segments: Strengthening Engagement & Frequency

- **Cluster 1: Recent Low-Value Recurrent Customers (N = 380, 6.47%)**
 - They have made recent purchases, but their spending is relatively low. This group shows engagement potential if nurtured properly.
- **Recommendations:**
 - **Increase Purchase Frequency:** Send personalized discounts and limited-time offers to encourage repeat purchases.
 - **Cross-Selling & Product Discovery:** Highlight complementary products and feature trending items in targeted email campaigns.
 - **Rewards:** Introduce a loyalty program where repeat purchases unlock higher discounts or exclusive perks.

Segment-Specific Recommendations

- **Cluster 4: Infrequent Low-Value Customers (N = 3,556, 60.5%)**
 - This is the largest customer segment, contributing a significant portion of revenue due to sheer volume. Their spending is low and infrequent, indicating a need for engagement strategies.
- **Recommendations:**
 - **Email Re-Engagement Campaigns:** Send personalized reminders and highlight seasonal deals to encourage them to return.
 - **Limited-Time Offers & Free Shipping:** Provide discounts or free shipping for their next purchase to reduce hesitation.
 - **Social Media & Retargeting Ads:** Use social media retargeting to display ads featuring products based on their past browsing history.

Segment-Specific Recommendations

Low-Priority Segment: Reactivating Lost Customers

- **Cluster 0: Lost Low-Value Customers (N = 1,914, 32.5%)**
 - These customers have not purchased recently and contribute minimal revenue. Reactivating them requires cost-effective strategies since their overall value is low.
- **Recommendations:**
 - **Send "We Miss You" emails** with a small discount to encourage another purchase.
 - **Identify Lapsed Reasons:** Use customer surveys to understand why they stopped purchasing and adjust marketing strategies accordingly.

Additional Recommendations

- Seasonal & Wholesale Focus
 - **Capitalize on Peak Seasons (Sept-Nov):** Since revenue is highest during these months, create targeted promotions early to maximize sales.
 - **Wholesale Customer Strategy:** Since a significant portion of customers are wholesalers, create bulk purchase incentives and a wholesale membership program.
- Refined Marketing Strategies
 - **Email Segmentation & Automation:** Use segmented email marketing to send different offers based on cluster behaviors.
 - **Referral & Social Media Engagement:** Encourage referrals by offering discounts to customers who bring in new shoppers.