



E-COMMERCE PRESENTATION

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INTRODUCTION

The competitive e-commerce industry thrives on understanding customer preferences, behavior, and value to optimize business strategies and marketing efforts.

Analyze customer purchase patterns i to predicting future behaviors and aligning with organizational objectives like boosting customer retention, reducing churn rates, and increasing lifetime value.

Expected Deliverables

Comprehensive RFM Segmentation Report

Decile Analysis

Actionable Recommendations

DATA DICTIONARY

- **InvoiceNo** - unique number per transaction
- **StockCode**- unique identifier assigned to each product or item in the inventory.
- **Description** - detailed information about product
- **Quantity**- number of products ordered
- **InvoiceDate**-transaction date and time
- **unitprice**- price per unit of the product
- **customerid**-unique id assigned to customers
- **country**-country the customer belonged

Unique Customers

270.571K

Frequency of Transactions

19.533K

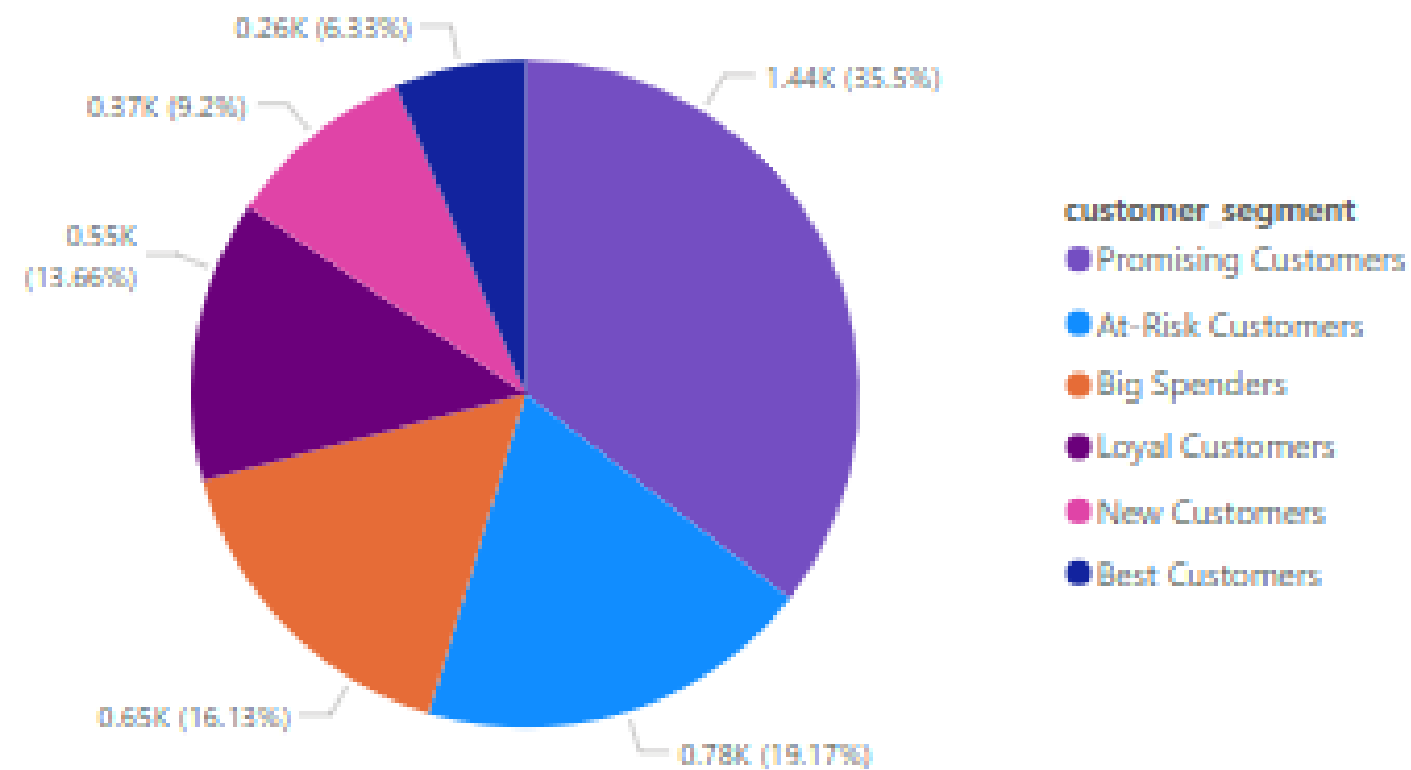
total_sales

\$8.39M

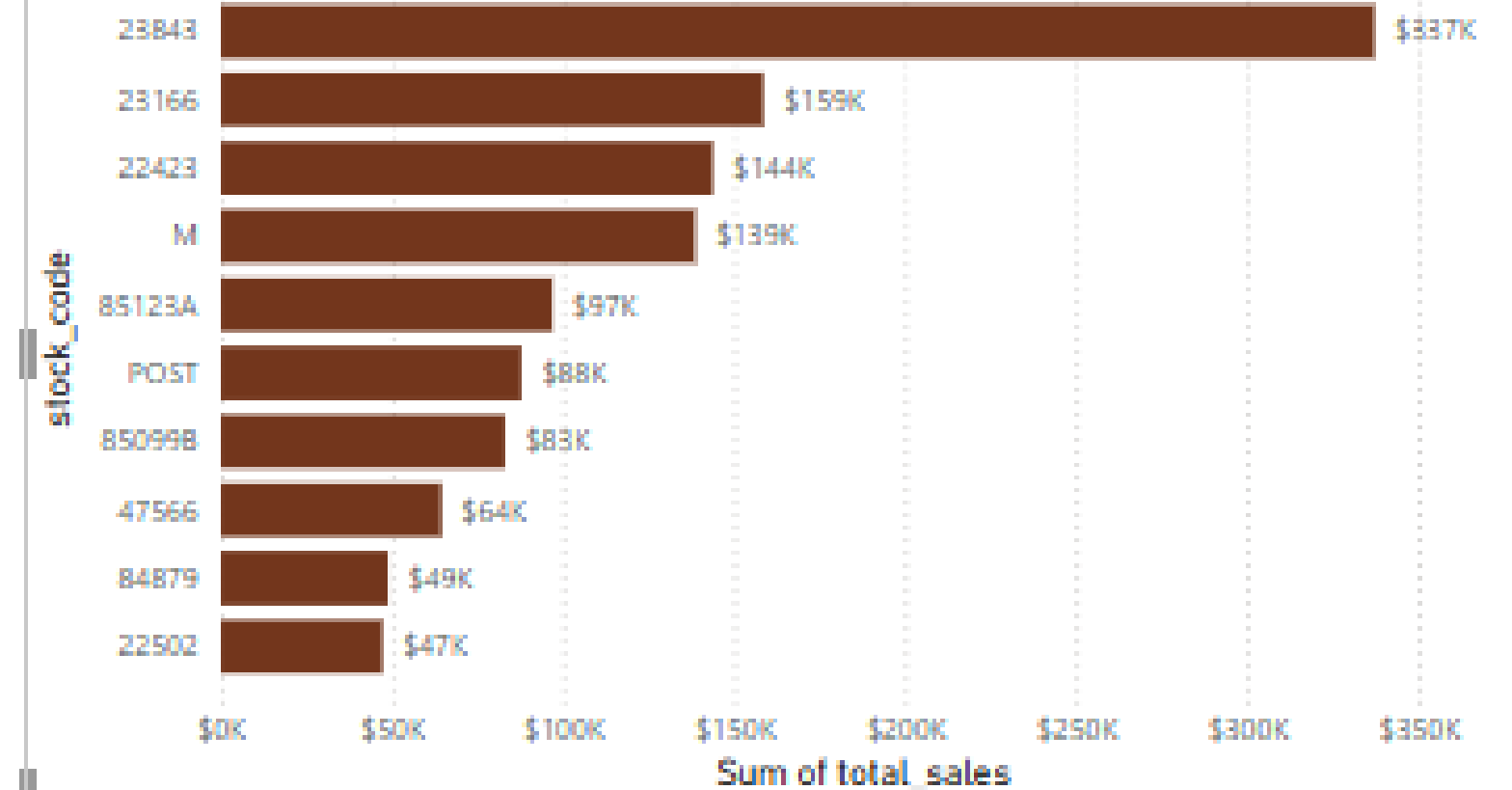
Average Purchase Size

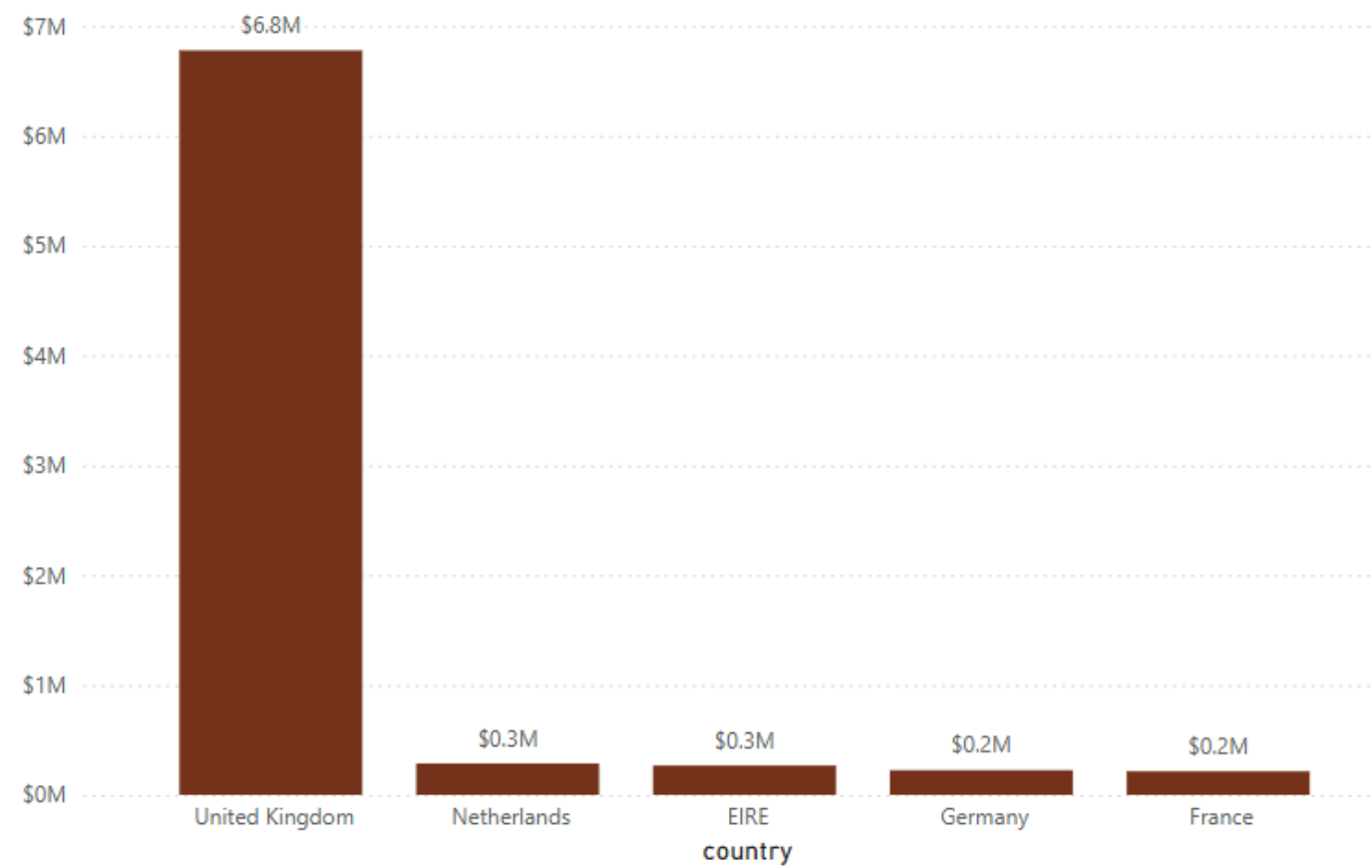
\$30.99

customer Segmentation Distribution

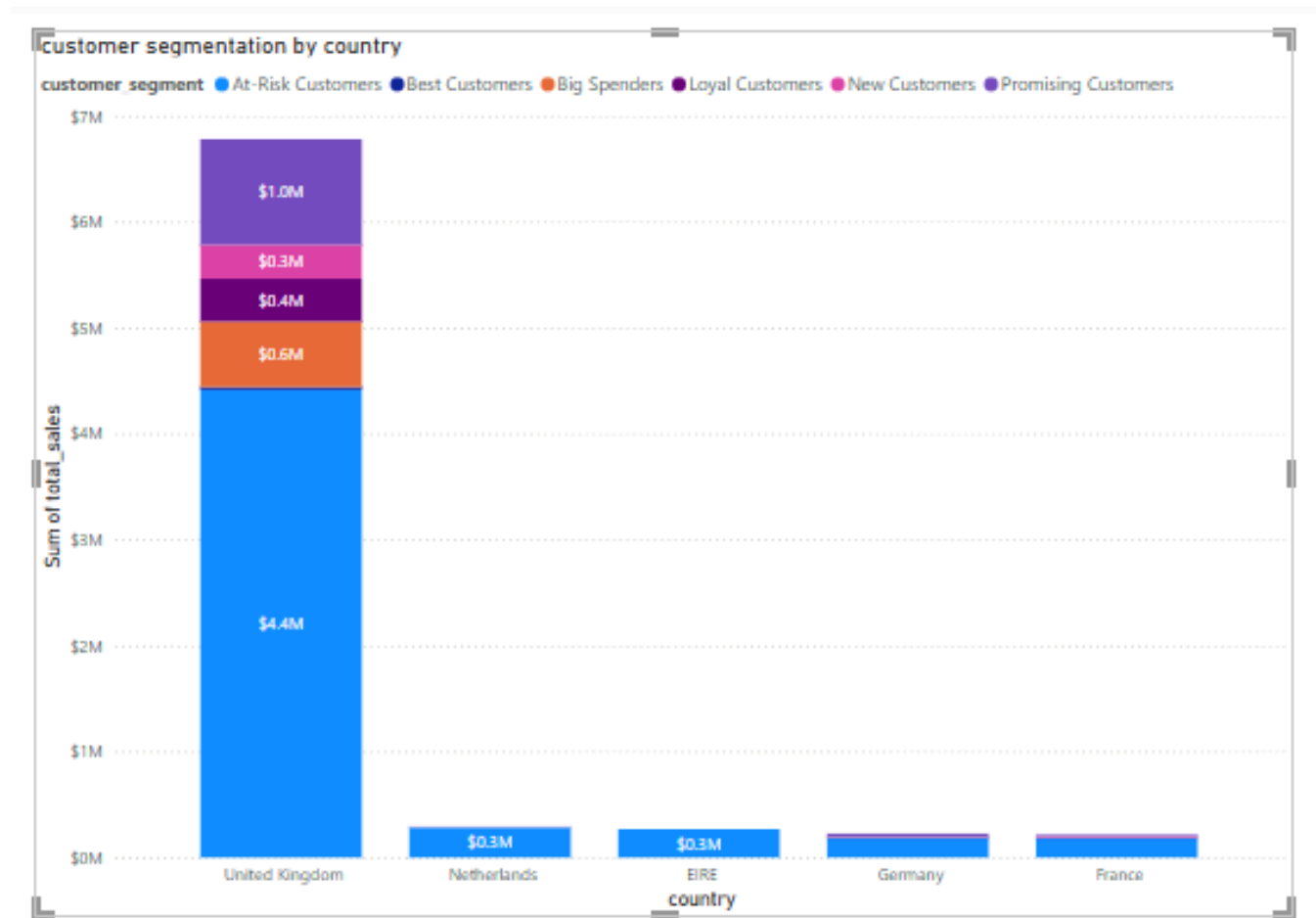


top performing products

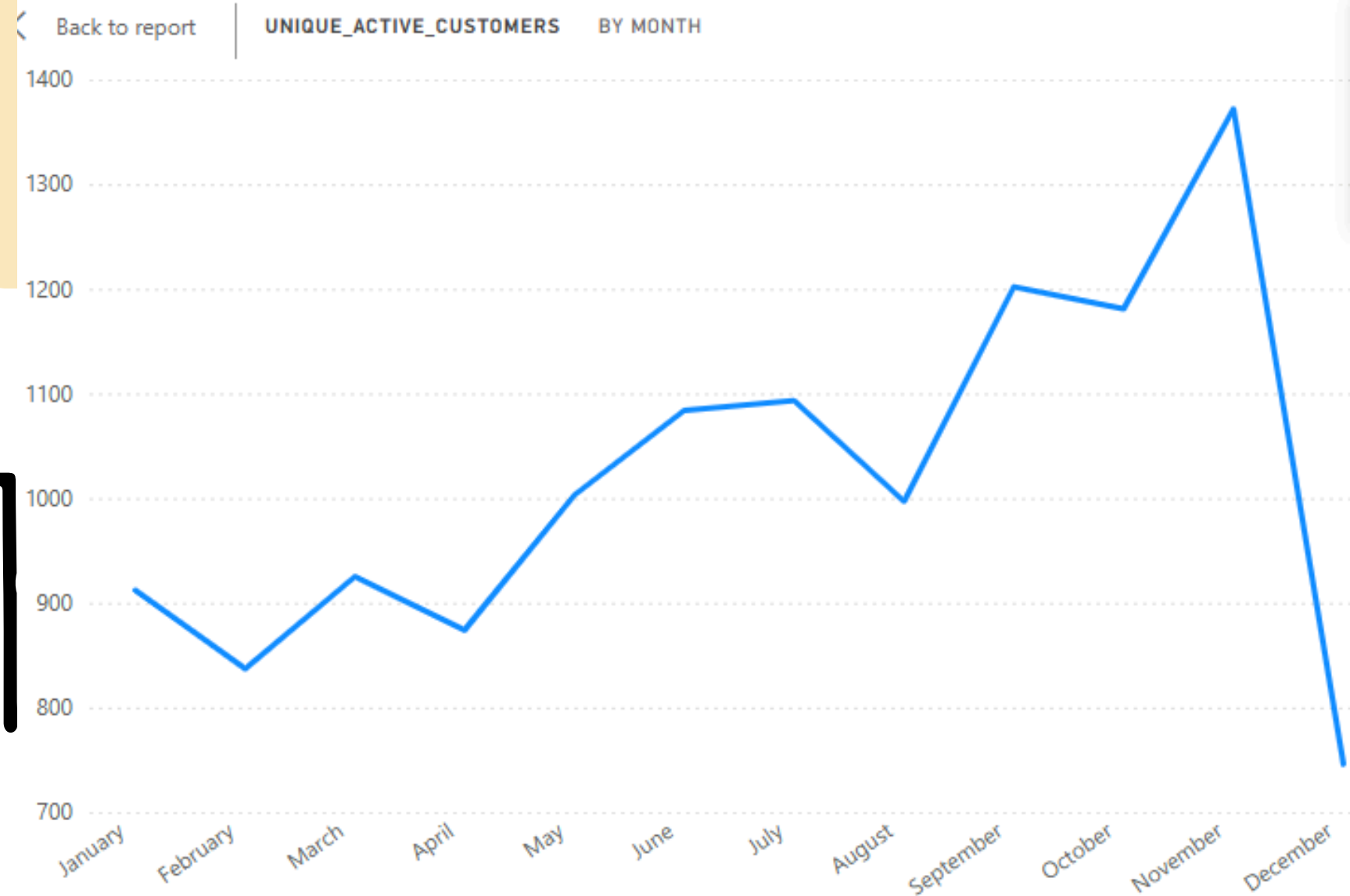




- UK Dominates: The United Kingdom leads by a huge margin, generating \$6.8M in sales.
- Other Countries Lag: The Netherlands and EIRE make around \$0.3M each, while Germany and France contribute \$0.2M each.
- Sales Imbalance: There's a big gap between the UK and the rest, showing heavy dependence on the UK market.



The United Kingdom makes the most sales, with \$4.4M from Loyal Customers and a total of \$6M overall. Other countries, like the Netherlands, EIRE, Germany, and France, have very low sales, around \$0.3M each. Big Spenders, Best Customers, and Promising Customers contribute significantly in the UK, but not much in other countries. This shows the UK market is strong, while other countries need more focus to boost sales.



Insights from the Unique Active Customers by Month:

1. Steady Growth: Active customers increased steadily from 900 in January to 1,200 in July, showing strong customer acquisition and retention.
2. Seasonal Fluctuations: The dip in August suggests a seasonal slowdown or reduced marketing but recovered well in September and October.
3. Significant Surge in November: The sharp rise to 1,400 customers in November could be due to holiday sales or targeted campaigns.
4. Drastic Decline in December: The steep drop in December may indicate data gaps, post-holiday slowdown, or operational issues.

Recommendations:

1. Replicate Successful Campaigns:

- Since November saw a significant rise in active customers, analyze the marketing strategies, promotions, and discounts offered during this period.
- Example: If a Black Friday sale led to the increase, plan similar flash sales, bundle offers, or free shipping promotions in other months.

2. Address August Dip:

- Boost engagement in August by offering seasonal products, or targeted promotions to re-engage inactive customers.
- Example: Implement email campaigns with special discounts or loyalty rewards to drive purchases during this slower month.

3. Mitigate December Drop:

- If the December decline is due to low sales post-holidays, introduce New Year promotions, clearance sales, or gift card offers to maintain customer interest.
- Example: Encourage repeat purchases by offering discount codes for January on December purchases.

Year	Quarter	total_sales
2011	Qtr 3	\$2.44M
2011	Qtr 4	\$1.92M
2011	Qtr 2	\$1.86M
2011	Qtr 1	\$1.67M
2010	Qtr 4	\$0.23M
2010	Qtr 3	\$0.12M
2010	Qtr 1	\$0.11M
2010	Qtr 2	\$0.05M

Insights from Quarterly Sales:

- 1.Strong Performance in 2011: Sales showed a significant boost in 2011, with Q3 leading at \$2.44M, followed by Q4 at \$1.92M, indicating successful sales strategies or seasonal demand.
- 2.Low Sales in 2010: Sales remained consistently low throughout 2010, peaking at just \$0.23M in Q4, suggesting limited growth or operational challenges.
- 3.Year-on-Year Improvement: The transition from 2010 to 2011 reflects strong business growth, with a nearly tenfold increase in quarterly sales.

Insights from the RFM Heatmap:

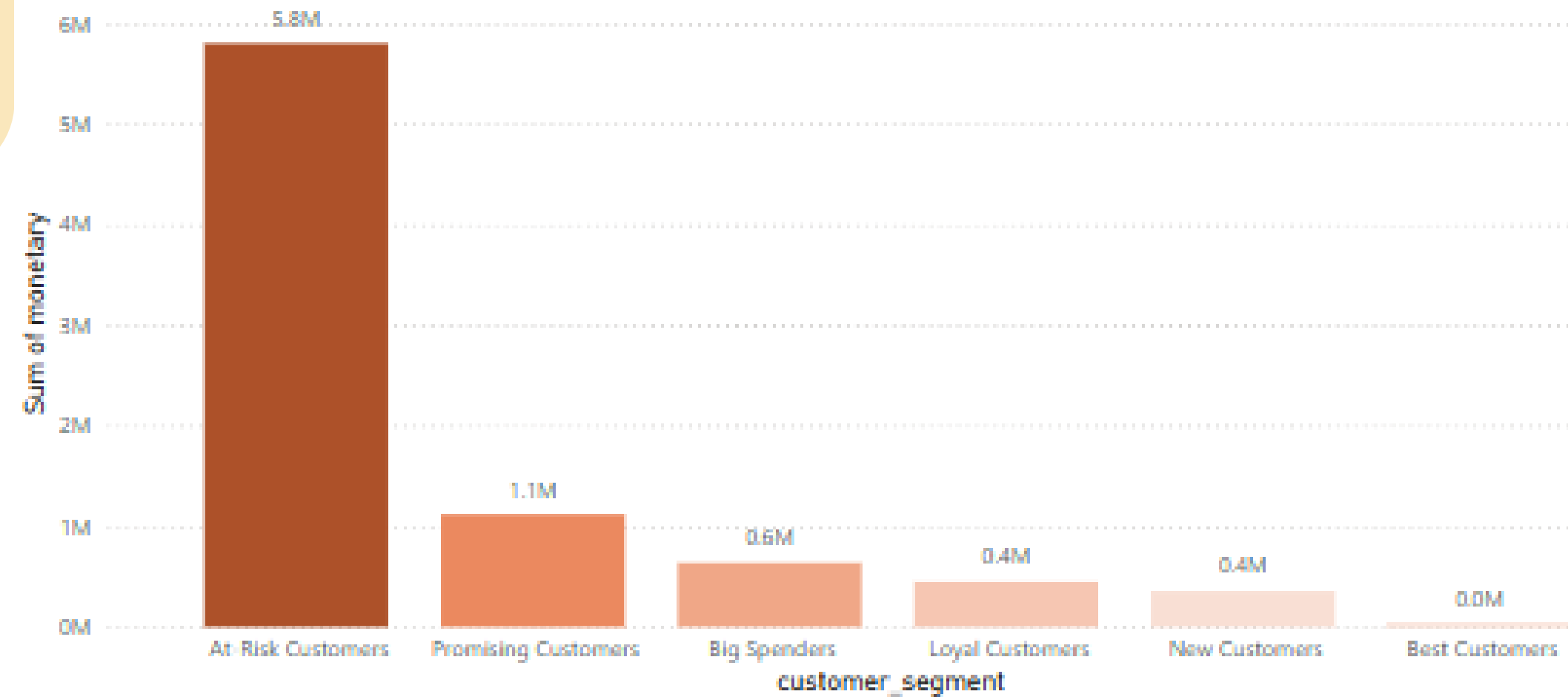
1. At-Risk Customers (19.17%): The highest concentration (7.60%) is in the 110 score bin, indicating a need for reactivation strategies for disengaged customers.
2. Promising Customers (35.50%): The largest segment, with strong potential to convert into loyal or best customers through targeted engagement.
3. Big Spenders (16.13%): The highest spenders are seen in the 440 bin (4.85%), showing opportunities for premium offerings or exclusive deals.
4. Loyal Customers (13.66%): Spread across multiple bins, indicating a stable customer base that could benefit from loyalty programs.
5. Best Customers (6.33%): Lower percentage but high value, focus on retention strategies to maintain long-term loyalty.

rfm_score (bins)	At-Risk Customers	Best Customers	Big Spenders	Loyal Customers	New Customers	Promising Customers
110	7.60%				1.21%	
120	1.09%		0.02%		3.66%	
130	0.25%		0.10%		2.57%	
140	0.02%		0.25%		1.76%	
150			1.48%			
210	3.98%					1.48%
220	0.87%		0.05%			4.38%
230	0.27%		0.22%			3.39%
240	0.10%		0.67%			2.20%
250			2.40%			
310	2.15%					1.36%
320	0.77%		0.07%			3.88%
330	0.27%		0.25%			3.76%
340	0.17%		0.62%			3.46%
350			3.22%			
410	1.14%					0.72%
420	0.27%		0.10%			3.12%
430	0.15%		0.62%			4.18%
440	0.07%		1.21%			3.56%
450			4.85%			
510				0.37%		
520				1.73%		
530				3.96%		
540				5.89%		
550		6.33%		1.71%		
Total	19.17%	6.33%	16.13%	13.66%	9.20%	35.50%

Recommendations:

- Re-engage At-Risk Customers: Send personalized offers, reminders, or win-back campaigns to those in the 110 bin.
- Example: Offer limited-time discounts or special incentives.
- Nurture Promising Customers: Provide targeted promotions, product recommendations, and welcome offers to convert them into loyal customers.
- Leverage Big Spenders: Introduce premium products, early access sales, or exclusive memberships to maximize spending potential.
- Reward Loyal Customers: Implement a loyalty program with points, rewards, or referral incentives to strengthen brand connection.
- Retain Best Customers: Maintain high satisfaction with personalized experiences, priority support, and VIP offers to keep them engaged.

sales contribution by different customer segment



- The "At Risk Customers" segment contributes the highest revenue (5.8M), significantly outpacing all other segments.
- "Promising Customers" are the next highest contributors, but their revenue (1.1M) is still much lower.
- Segments like "Big Spenders," "Loyal Customers," "New Customers," and "Best Customers" contribute very little to overall sales, which indicates a missed opportunity to drive revenue from these potentially valuable groups.

RECOMMENDATION

1. Re-Engage At-Risk Customers:

- Implement personalized reactivation campaigns using targeted offers, discounts, or reminders.
- Utilize email marketing, SMS campaigns, and retargeting ads to reconnect and recover lost customers.

2. Nurture Promising Customers:

- Create a conversion-focused strategy to move them into higher-value segments.
- Offer incentives, loyalty rewards, or personalized product recommendations to encourage repeat purchases.

3. Boost Engagement with Best Customers:

- Develop a VIP program to reward loyalty and increase purchase frequency.
- Provide exclusive deals, early access to products, and personalized experiences to strengthen loyalty.

4. Maximize Potential of Big Spenders & Loyal Customers:

- Design cross-selling and upselling strategies.
- Introduce bundled offers or personalized suggestions based on purchase history.

5. Attract & Convert New Customers:

- Implement welcome offers or first-purchase discounts.
- Provide a smooth onboarding experience, highlighting best-selling products and special promotions.



THANK YOU