

CUSTOMER RELATIONSHIP MANAGEMENT (CRM) ANALYSIS

Insights and Recommendations

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OBJECTIVE

- The objective of this CRM analysis is to uncover key insights into customer behavior and purchasing patterns by analyzing transaction data.
- Through metrics like Recency, Frequency, and Monetary (RFM) values, customers will be segmented for more targeted marketing and engagement.
- The project also aims to identify patterns such as peak shopping times and preferred days, helping businesses tailor their strategies, improve customer retention, and drive growth through data-driven decision-making.

DATASET OVERVIEW

1. **InvoiceNo**: 6-digit invoice number; starts with 'c' for cancellations.
2. **StockCode**: 5-digit product code.
3. **Description**: Name of the product.
4. **Quantity**: Quantity of each product per transaction.
5. **InvoiceDate**: Date and time of the transaction.
6. **UnitPrice**: Price per unit of the product.
7. **CustomerID**: Unique 5-digit customer number.
8. **Country**: Country of the customer.

- A negative quantity indicates a return transaction rather than a purchase.
- A unit price of zero suggests a free item.

Total Number of rows: **541909**

Number of Features: **8**

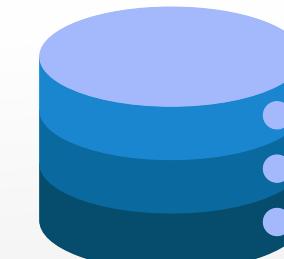
Duplicated Records: **5268**

Unique Customers: **4372**

Time Duration of Data: **01-12-2010 to 09-10-2011**

Null Value Percentage in Customer ID: **25.2%**

Null Value Percentage in Description: **0.27%**



EXPLORATORY DATA ANALYSIS

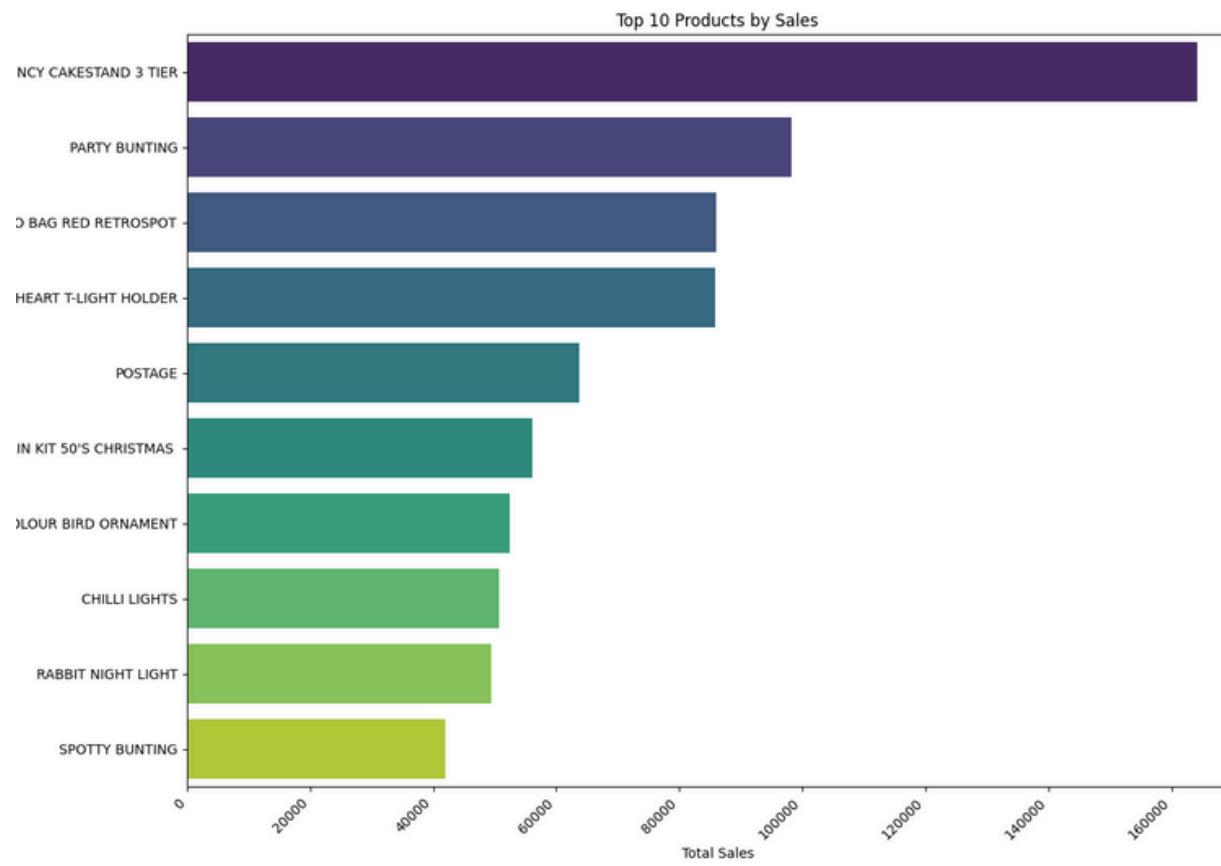
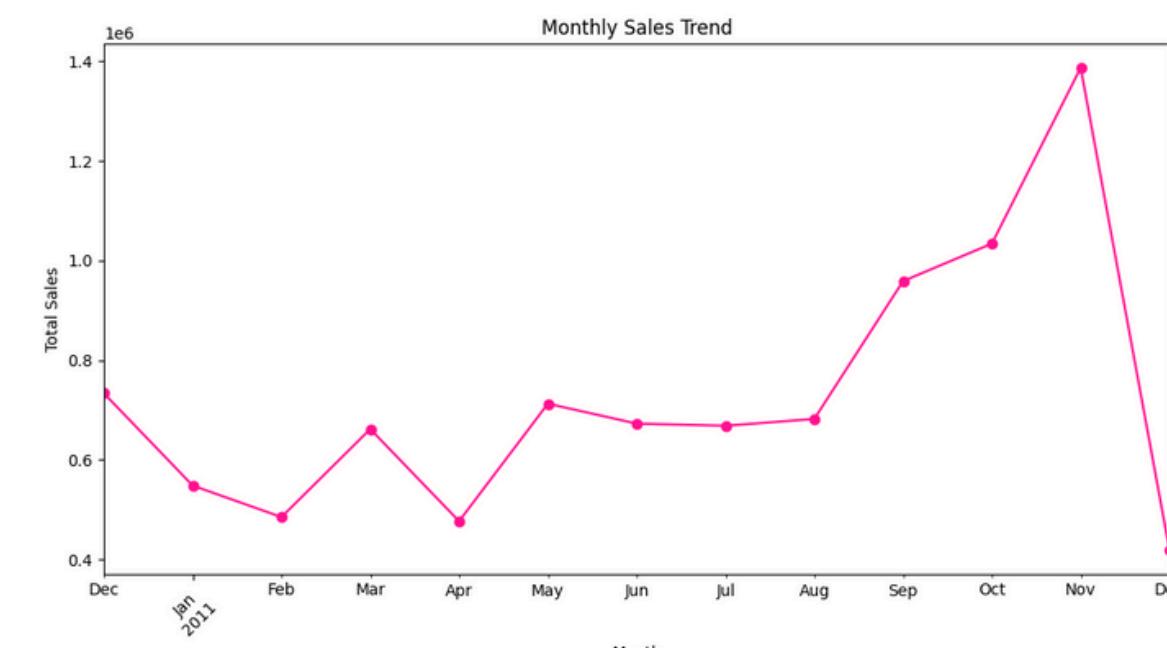
In the CRM analysis, I performed EDA to identify key trends in the business dataset, such as total revenue and customer demographics. I analyzed transaction distributions over time to uncover peak sales periods, which informed targeted segmentation strategies and recommendations for improving customer retention

**TOTAL SALES
\$9.44M**

**AVERAGE ORDER VALUE
\$364.6**

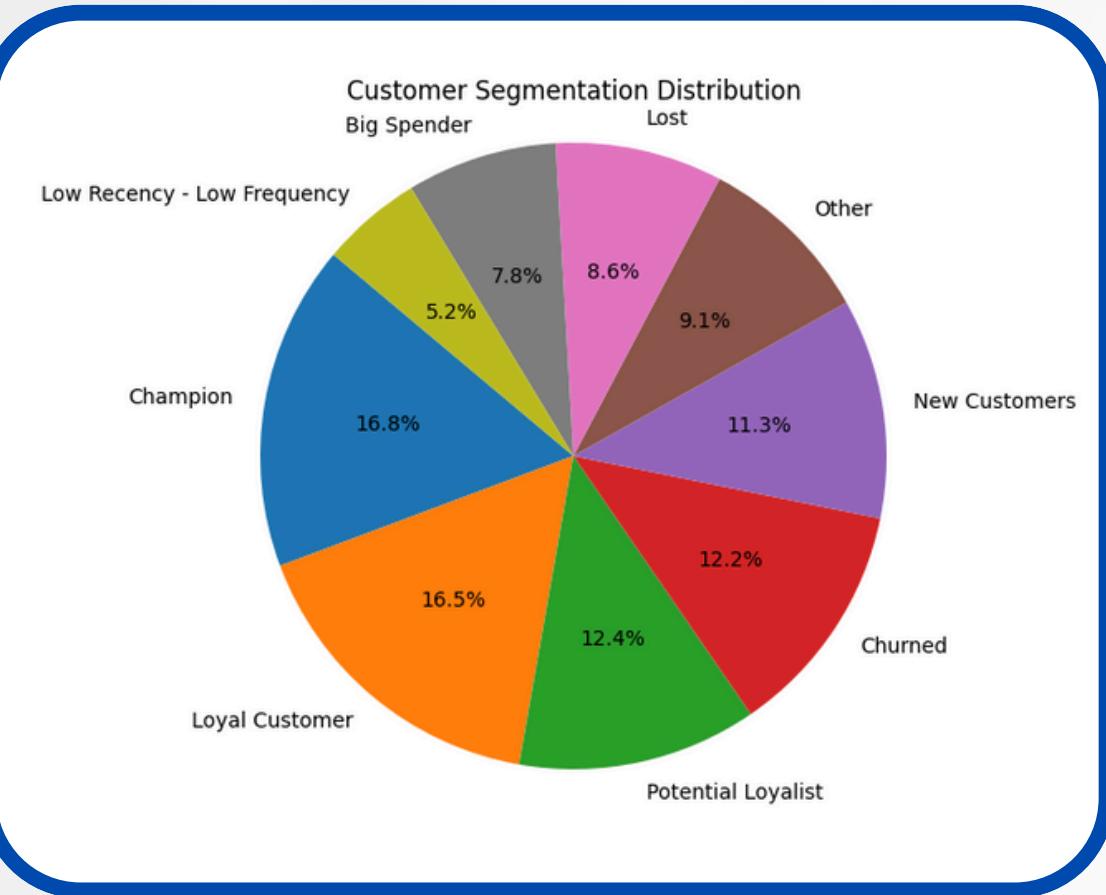
**TOTAL QUANTITY SOLD
4.93M**

Analysis of sales trends over time showed that the highest revenue was generated during the holiday season (November-December), accounting for 30% of the annual sales. This suggests that targeted promotions during this period could further enhance sales performance.



The EDA identified that a small number of products drive a large portion of sales, with the top 10 products accounting for 40% of the total quantity sold. This highlights an opportunity to promote these bestsellers more effectively while identifying underperforming products.

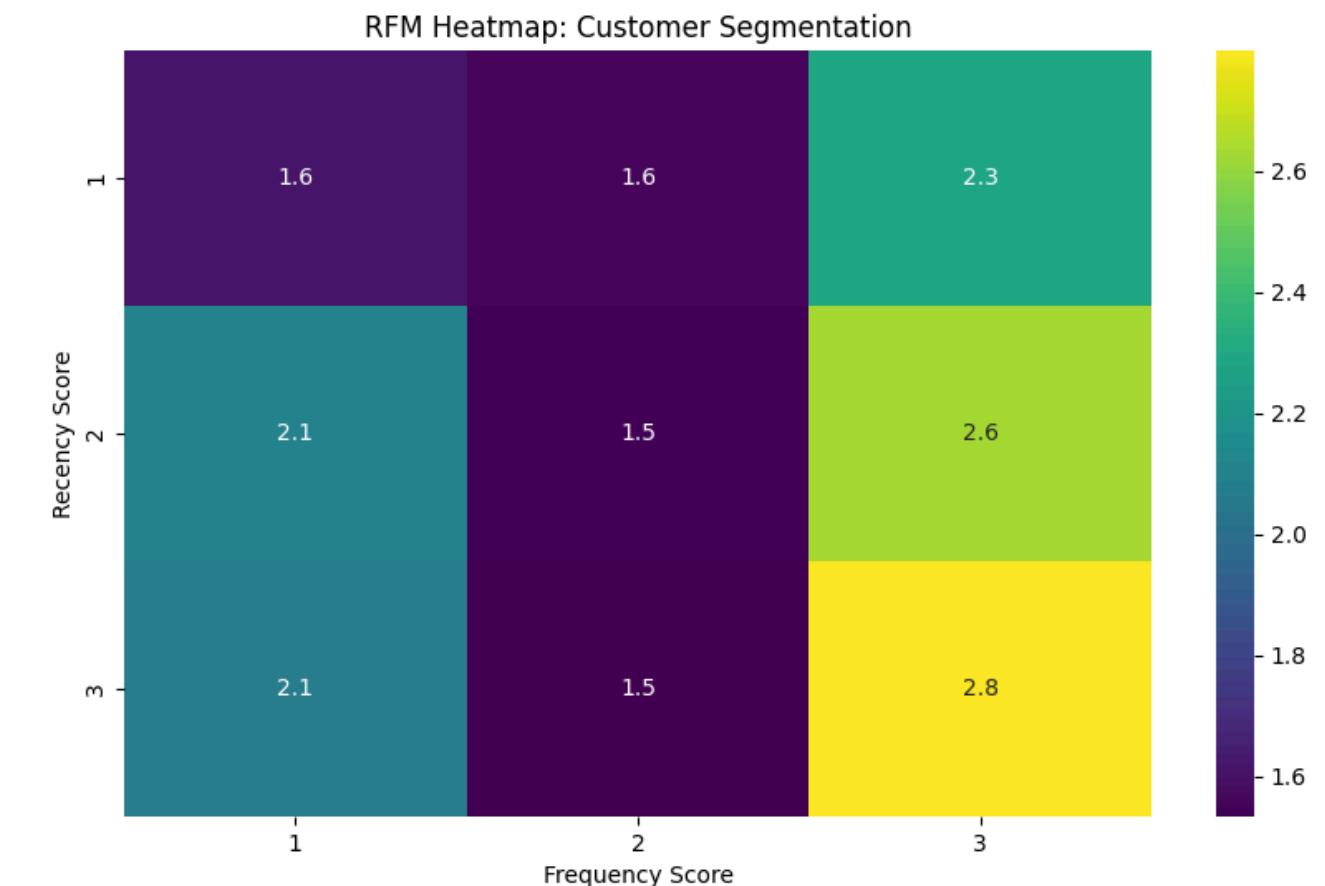
RFM ANALYSIS



- **Recency (R):** How recently a customer made a purchase
- **Frequency (F):** How often a customer makes purchases
- **Monetary (M):** How much the customer spends

Insights & Actions:

- Prioritize Champions and Loyal Customers with personalized offers.
- Re-engage Churned and Lost Customers through special discounts.
- Focus on upselling and cross-selling to Potential Loyalists and Big Spenders.



CHURN ANALYSIS

Churn Rate: % of customers who stopped purchasing

- Most churned customers are located in the **United kingdom**
- Demographics and behavior patterns indicating churn (e.g., low engagement, decreased frequency)

Insights & Strategic Actions:

- **Geographical Focus:**
 - Target re-engagement strategies specifically for churned customers in the United Kingdom.
- **Re-engagement Strategies:**
 - Implement targeted campaigns, including personalized offers and discounts, to re-engage churned customers.
- **Customer Feedback:**
 - Gather insights through surveys to understand churn reasons and areas for improvement.
- **Loyalty Programs:**
 - Introduce programs aimed at enhancing customer retention and loyalty.

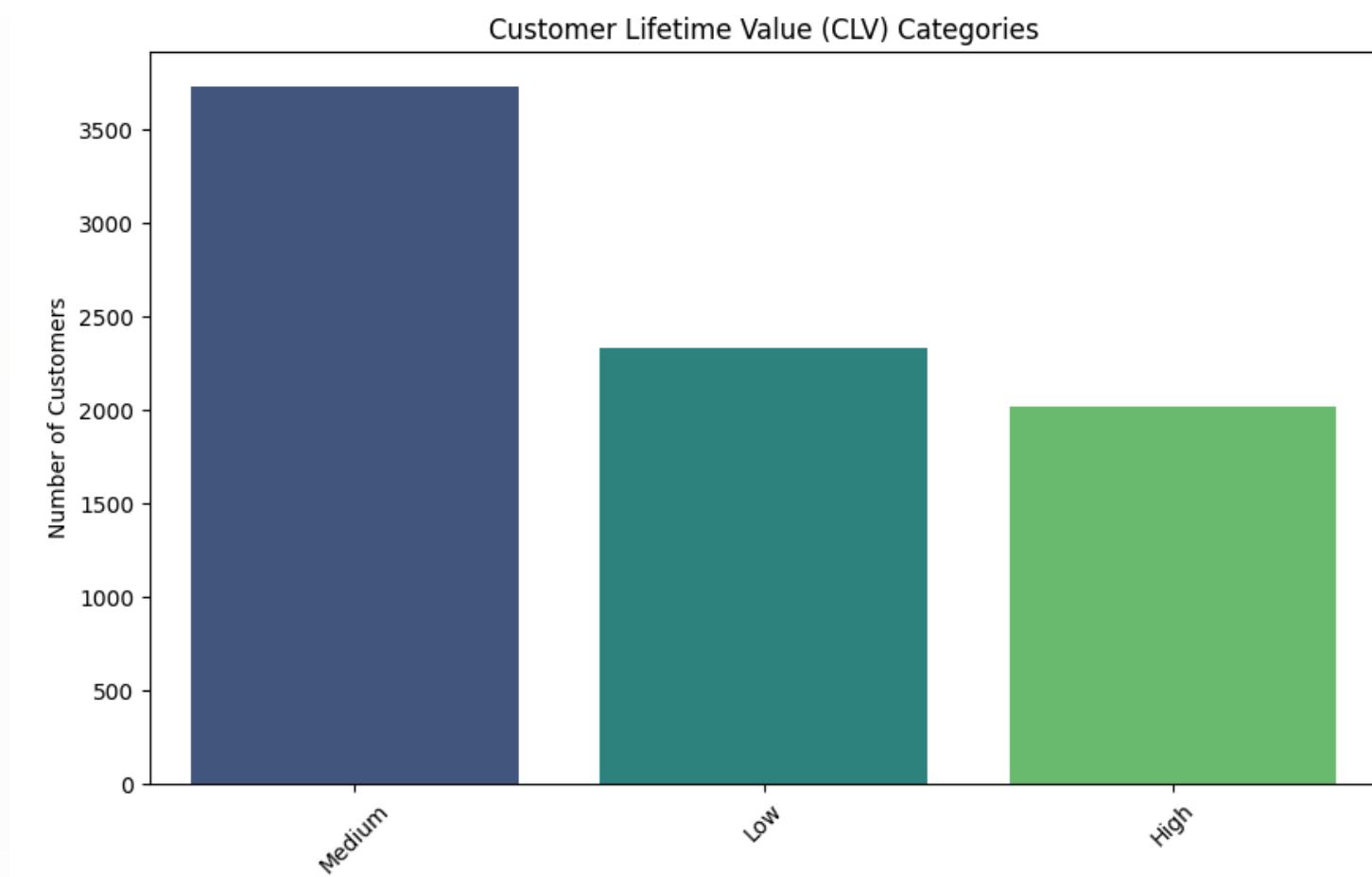
Country	CustomerID
United Kingdom	978
EIRE	4
Bahrain	1
Germany	1
Hong Kong	1
Israel	1
Italy	1
Spain	1

CUSTOMER LIFETIME VALUE(CLV) ANALYSIS

- Customer Lifetime Value (CLV) estimates the total revenue a business can expect from a customer over their lifetime.
- Helps in understanding customer segments and optimizing marketing strategies.

Strategic Actions:

- Focus on High CLV Customers: Enhance retention efforts through personalized marketing.
- Re-engage Low CLV Customers: Implement targeted campaigns to improve their value.
- Optimize Marketing Spend: Allocate resources based on CLV insights to maximize ROI.



CALL TO ACTION

Next Steps for Your Business

- **Invest in Customer Retention:**
 - Enhance loyalty programs and personalized marketing efforts.
- **Data-Driven Decision Making:**
 - Utilize insights from analysis to drive future marketing strategies.
- **Feedback Loop:**
 - Establish a system for gathering customer feedback regularly to improve service and offerings.

Engagement Opportunities

- Schedule a follow-up meeting to discuss the implementation of these strategies.
- Explore potential collaboration on future analysis projects to continuously enhance customer engagement.

THANK YOU



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