

Unlocking Customer Insights: An RFM Analysis

Data Overview

The dataset contains a comprehensive set of customer-related information, transaction details and product attributes.

Varied data types include numerical and categorical.

It contains everything that is needed for RFM analysis like, Transaction date, Transactions Id and amount spent by the customers.

CustomerID	float64
Gender	object
Location	object
Tenure_Months	float64
Transaction_ID	float64
Transaction_Date	object
Product_SKU	object
Product_Description	object
Product_Category	object
Quantity	float64
Avg_Price	float64
Delivery_Charges	float64
Coupon_Status	object
GST	float64
Date	object
Offline_Spend	float64
Online_Spend	float64
Month	int64
Coupon_Code	object
Discount_pct	float64

RFM calculation

Recency (R): Measure the time since the last purchase of each customer.

Frequency (F): Count the number of transactions made by each customer over a specific period.

Monetary Value (M): Calculate the total amount spent by each customer during the analyzed timeframe.

CustomerID	Recency	Frequency	Monetary
12346.0	108	2	11093.34
12347.0	60	59	243355.54
12348.0	74	23	121977.33
12350.0	18	17	126383.27
12356.0	108	36	199680.12

Customer Segmentation

The Customers are scaled Depending upon there RFM_metrics.

They are Segmented into 7 different group,Which described the behaviour of our customers.

Segment
About to Sleep
At Risk
Hibernating
Loyal Customers
Need Attention
Potential Loyalists
Promising

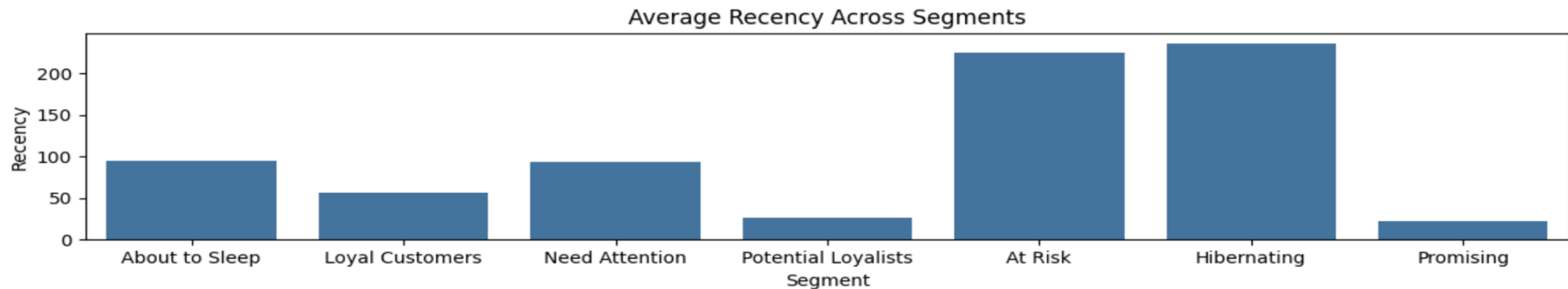
Insights and Patterns

Distribution of our customers in 7 segments.

- Segment 'Hibernating' and 'At Risk' covers around 50% of our customers.
- And we have very low Promising customers.

Customer Segmentation TreeMap





Recency across all segments:

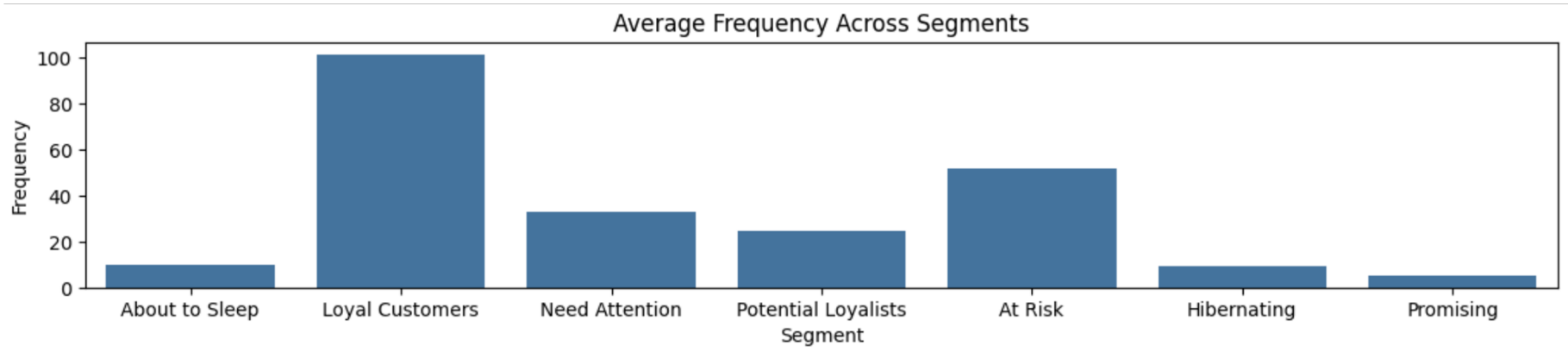
The graph shows how long the customers in that segment have not shopped .And the table shows segment wise mean for recency and the total customers in that segment

For example,

In the segment 'At risk' there are 279 customers who do not shop for an average of 225.16 days.

Where else, if you see 'Loyal Customers' with 236 count who do not shop for an average of 57 days.

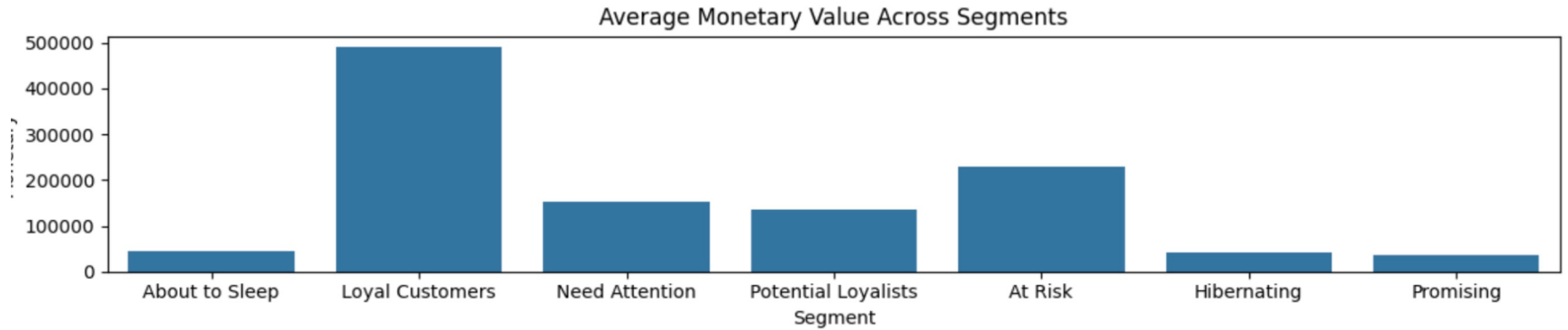
	Recency_mean	Recency_count
Segment		
About to Sleep	95.213415	164
At Risk	225.161290	279
Hibernating	235.908482	448
Loyal Customers	57.084746	236
Need Attention	93.637255	102
Potential Loyalists	26.729282	181
Promising	22.517241	58



Similarly, in the segment 'At risk' there are 279 customers who shop for an average of 52.01 times in selected time frame.

But Loyal customers shop 101 times in a selected time frame which is about twice 'at risk' customers.

Segment	Frequency_mean
About to Sleep	9.841463
At Risk	52.017921
Hibernating	9.549107
Loyal Customers	101.427966
Need Attention	33.039216
Potential Loyalists	24.790055
Promising	5.603448



Similarly, in the segment 'At risk' there are 279 customers who spend an average of 230628.8 units of money

But Loyal customers spend 490105 units of money in a selected time frame which is about more than twice in 'At risk' customers.

	Monetary_mean
Segment	
About to Sleep	45083.463598
At Risk	230628.835914
Hibernating	41771.497746
Loyal Customers	490105.125678
Need Attention	152121.261569
Potential Loyalists	135873.439558
Promising	35091.171724

Marketing Strategies

For better marketing steps I have further divided them into three groups depending upon customers behaviour.

Group 1:

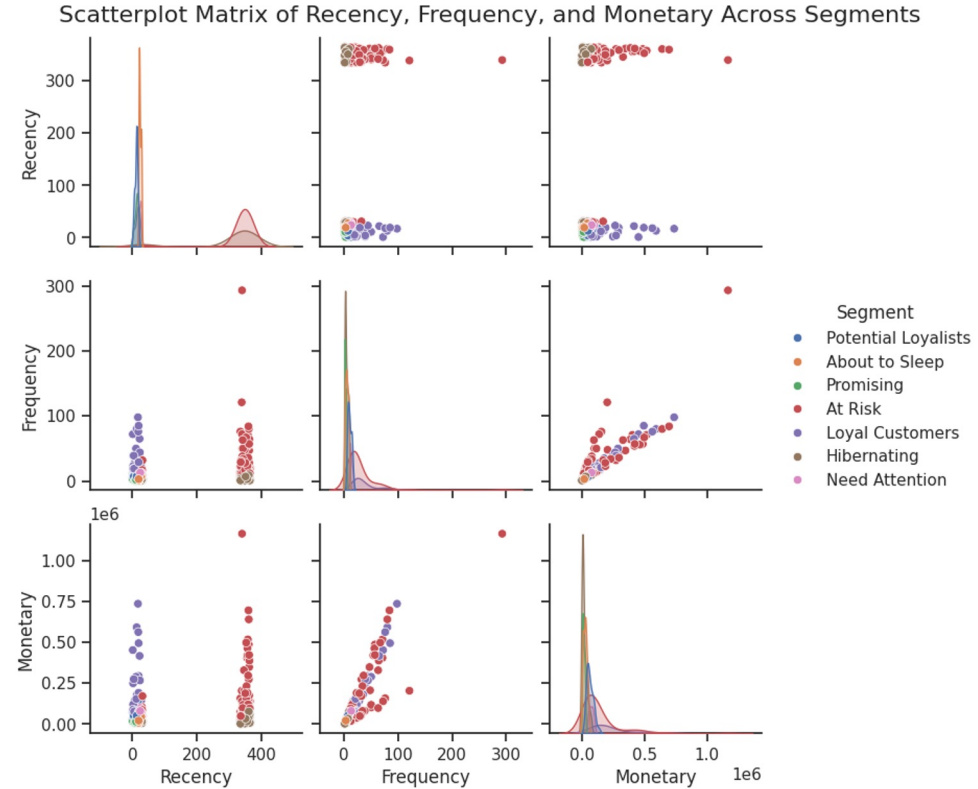
- Promising
- Potential Loyalist
- Loyal Customer

Group 2:

- Hibernating
- About to Sleep

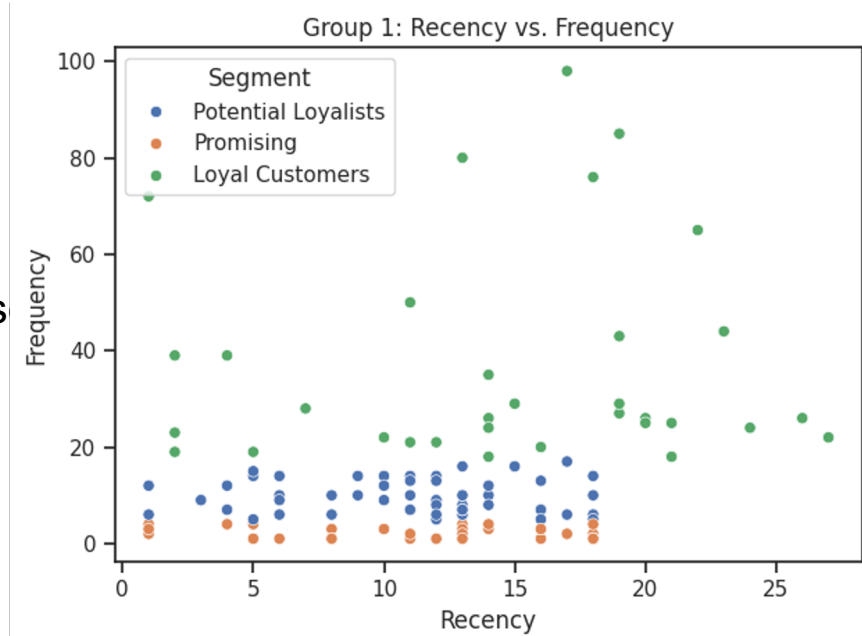
Group 3:

- At Risk
- Need Attention



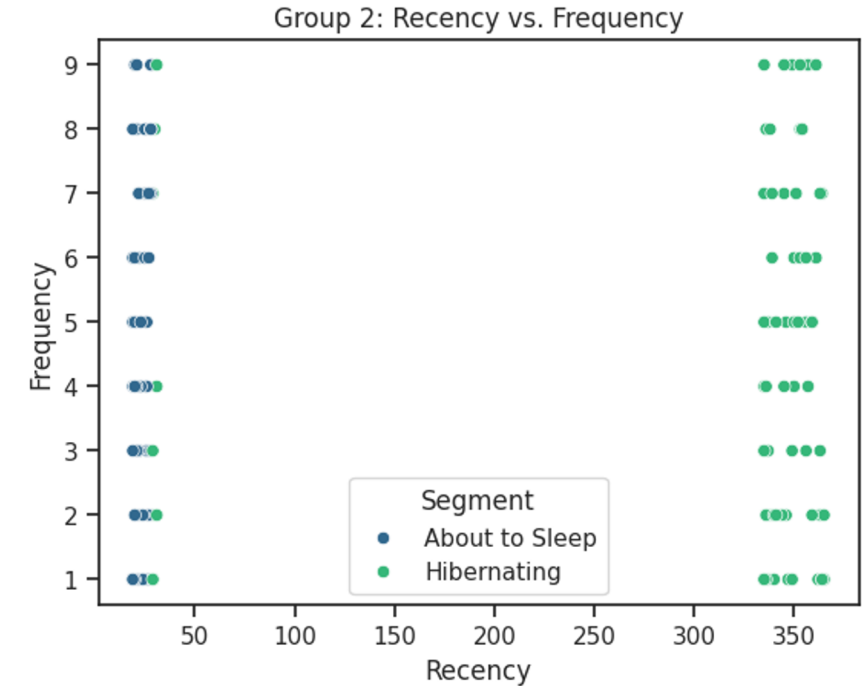
Group 1: Promising/Potential Loyalist/Loyal Customer (40%)

- Covers approximately 40% of our customer base
- The primary focus — maintaining their loyalty.



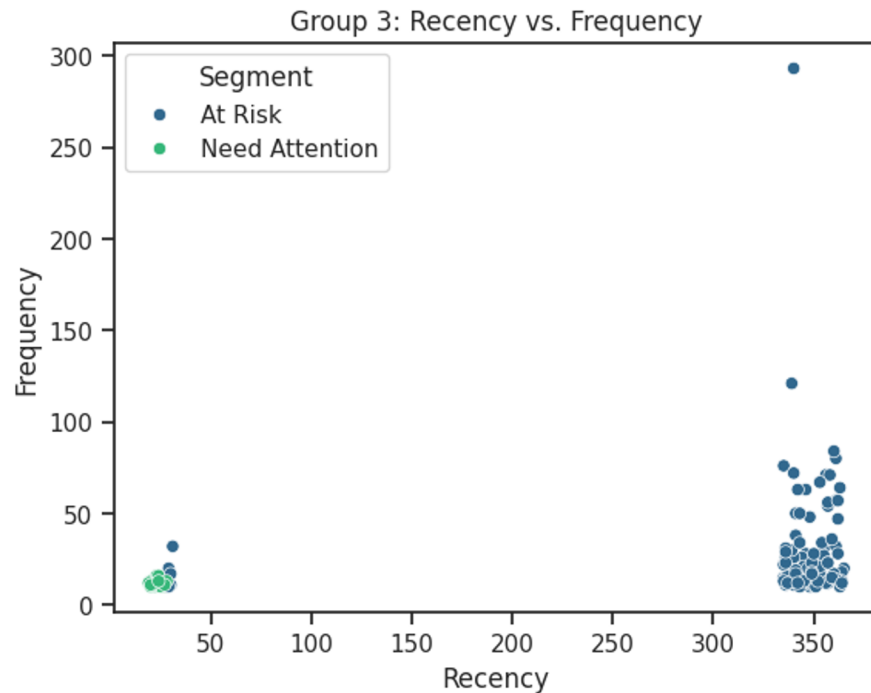
Group 2: Hibernating/About to Sleep (42%)

- Approximately 42% of our customer base falls into this category.
- They have made recent purchases but not very frequently.
- Engaging with them requires considerable time and resources, which may not be cost-effective at the moment.
- Therefore, prioritizing interactions with this segment is not recommended at this time.



Group 3: At Risk/Need Attention (18%)

- Comprising 18% of our customer base, the At Risk/Need Attention group possesses significant potential for conversion into loyal patrons.
- Their historical purchasing patterns suggest an opportunity to reignite their loyalty.
- However, given their relatively small portion of the customer base, even if successfully revived, the overall impact on our business may be limited



Conclusion:

Based on RFM analysis, the segment with the highest potential is the Loyal Customers segment due to 3 main reasons:

- High Purchase Frequency and Monetary Value
- Established Relationship:
- Lower Acquisition Cost

The main objective is to enhance customer loyalty and increase the average order value and purchase frequency of Loyal Customers. Following are the strategies that can be used to achieve the above strategies.

1. Exclusive Loyalty Programs:
2. Personalized Offers: Targeted Discounts, Birthday and Anniversary Gifts
3. Enhanced Engagement: Feedback Loops, Personalized Communication
4. Value-Added Services: Free Shipping, Exclusive Content
5. Referral Programs: Referral Incentives.

Thank you