



CUSTOMER SEGMENTATION RFM ANALYSIS

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ABOUT PROJECT

This project employs RFM (Recency, Frequency, Monetary) analysis to understand customer purchasing behavior. By evaluating how recently customers made purchases, how often they buy, and how much they spend, we can segment customers into meaningful groups. The objective is to enable targeted marketing strategies that increase customer retention, engagement, and revenue.

[Learn More](#)



DATA & METHODOLOGY

01

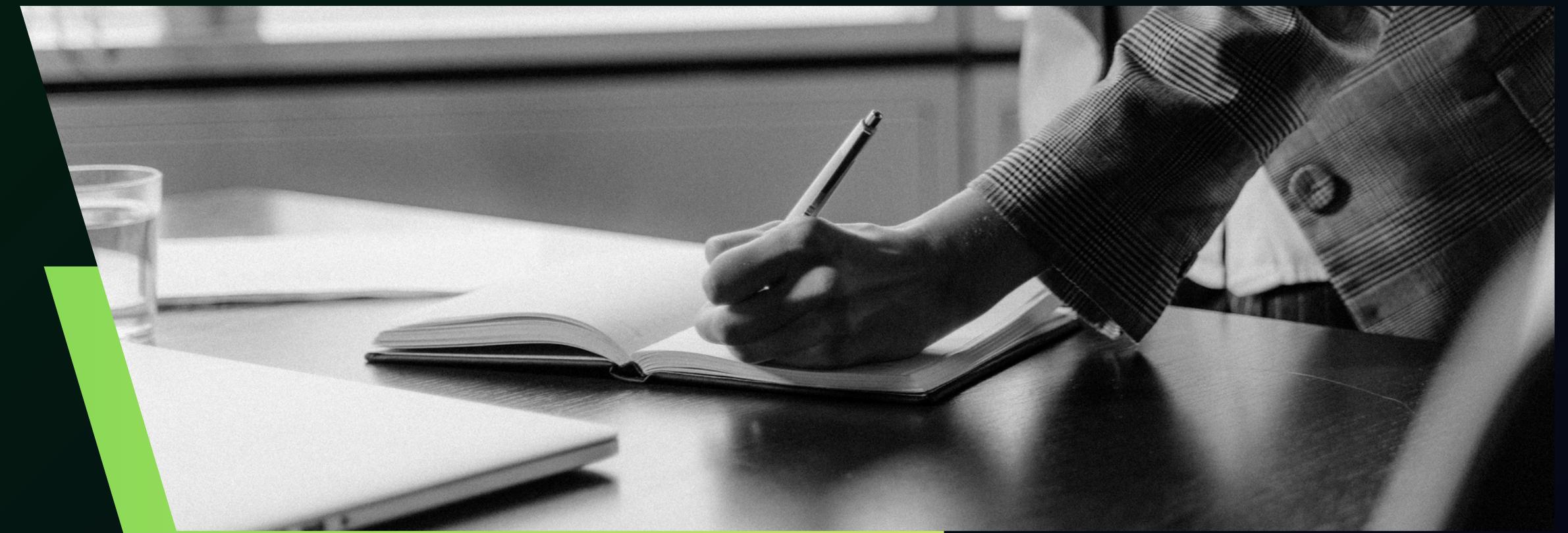
DATASET OVERVIEW:

- Contains transaction records with customer IDs, purchase dates, and purchase amounts.
- Data was cleaned and prepared by converting dates and aggregating customer transactions.

02

RFM METRICS DEFINED:

- Recency: Number of days since the customer's last purchase.
- Frequency: Total number of purchases made by the customer.
- Monetary: Total amount spent by the customer.



03



CUSTOMER GROUPS BASED ON RFM SCORES:

01

BEST CUSTOMERS:

Recent, frequent buyers with high spending.

02

LOYAL CUSTOMERS:

Regular purchasers with consistent spending.

03

POTENTIAL LOYALISTS:

Active but with room to increase engagement.

04

NEEDS ATTENTION:

Customers with declining purchase activity.

05

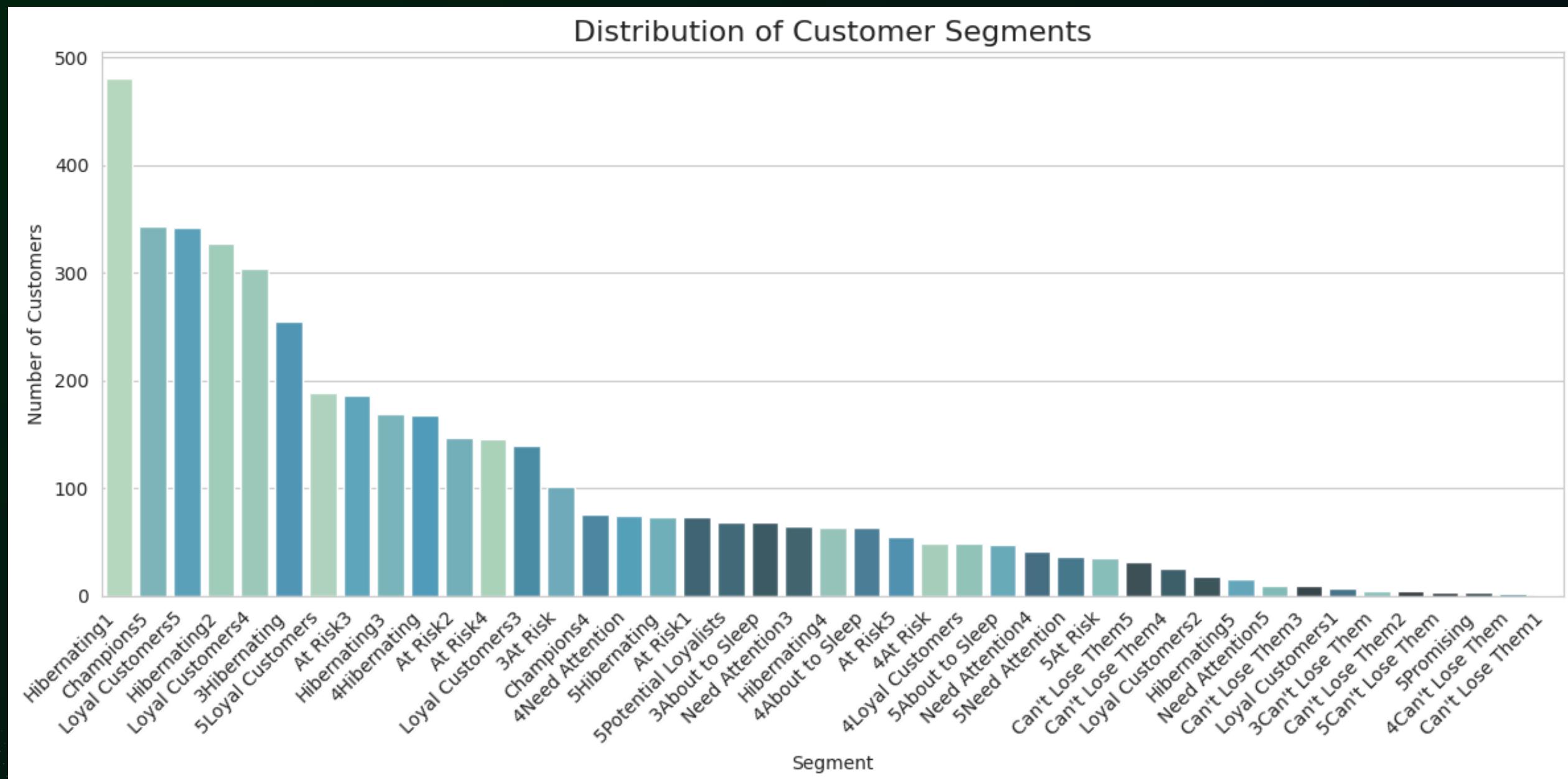
AT RISK:

Inactive customers requiring re-engagement efforts.



VISUALIZING RFM SEGMENTS

1. CUSTOMER SEGMENT COUNTS - This chart reveals the distribution of customers across different segments, showing which groups dominate your customer base and where marketing efforts might make the biggest impact.

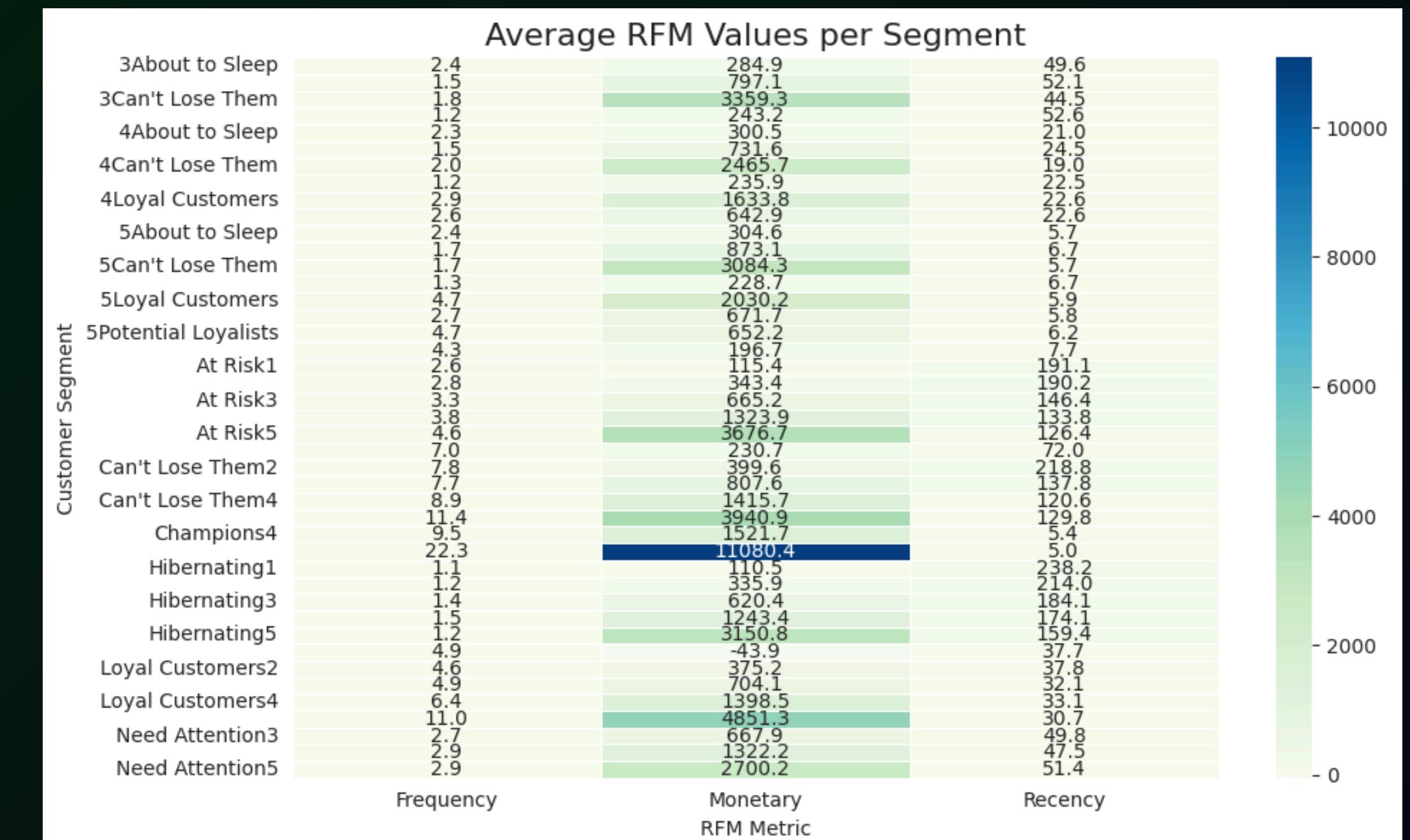




VISUALIZING RFM SEGMENTS

2. HEATMAP: AVERAGE R, F, M SCORES PER SEGMENT -

The heatmap highlights how Recency, Frequency, and Monetary metrics vary by segment. For example, 'Champions' show low Recency (recent purchases), high Frequency, and high Monetary values, confirming they are your most valuable customers.



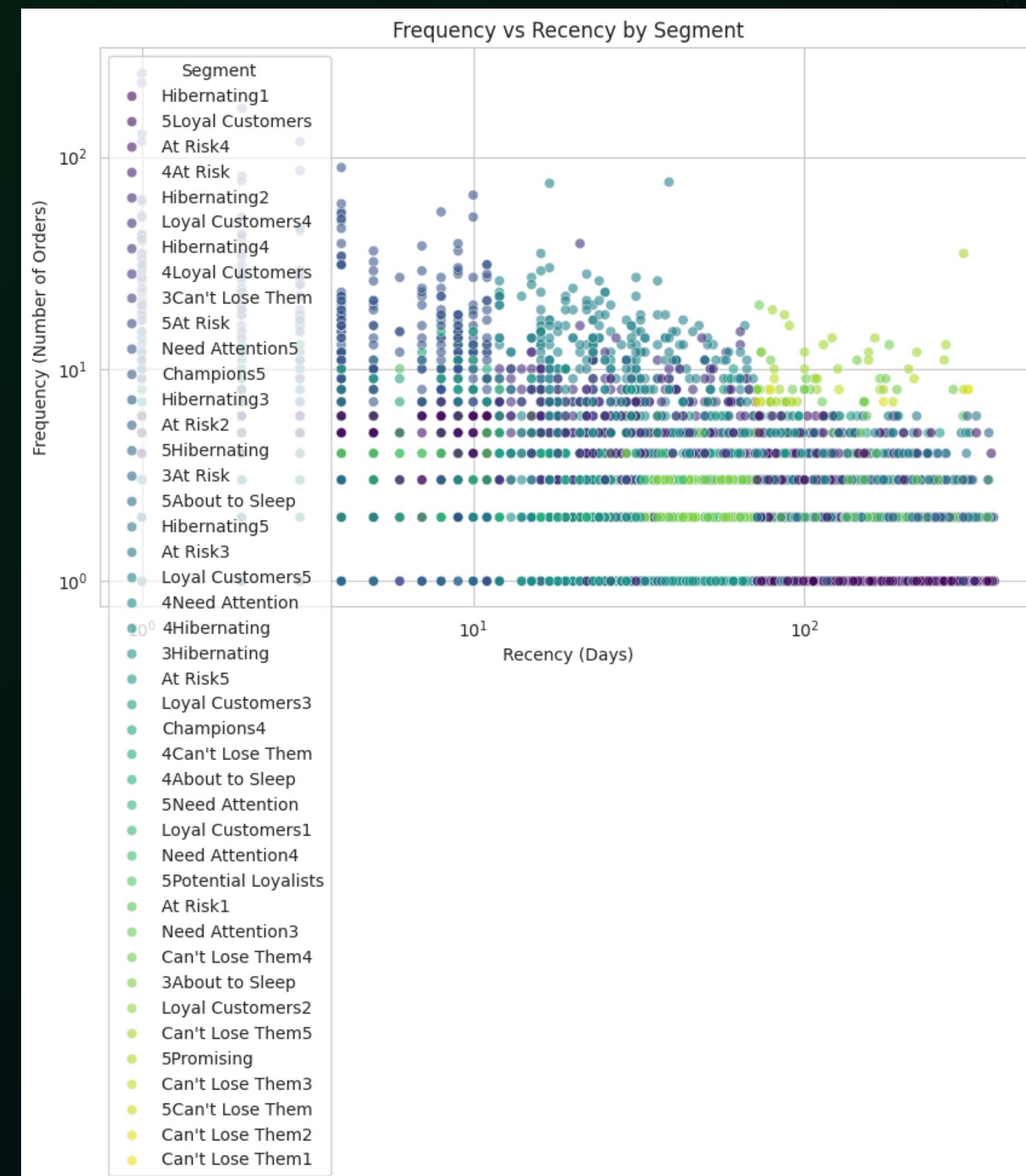


VISUALIZING RFM SEGMENTS

3. SCATTER PLOTS: RELATIONSHIPS BETWEEN R, F, M

Frequency vs Recency

This plot shows how often customers purchase (Frequency) relative to how recently they made their last purchase (Recency). Customers in the bottom-left corner (low Recency, high Frequency) are engaged buyers making frequent and recent purchases—these are typically your best or champion customers. Customers with high Recency but low Frequency (top-right) represent inactive or lapsed buyers who haven't purchased in a long time and buy infrequently. This helps identify who to target for re-engagement campaigns and who to reward for loyalty.

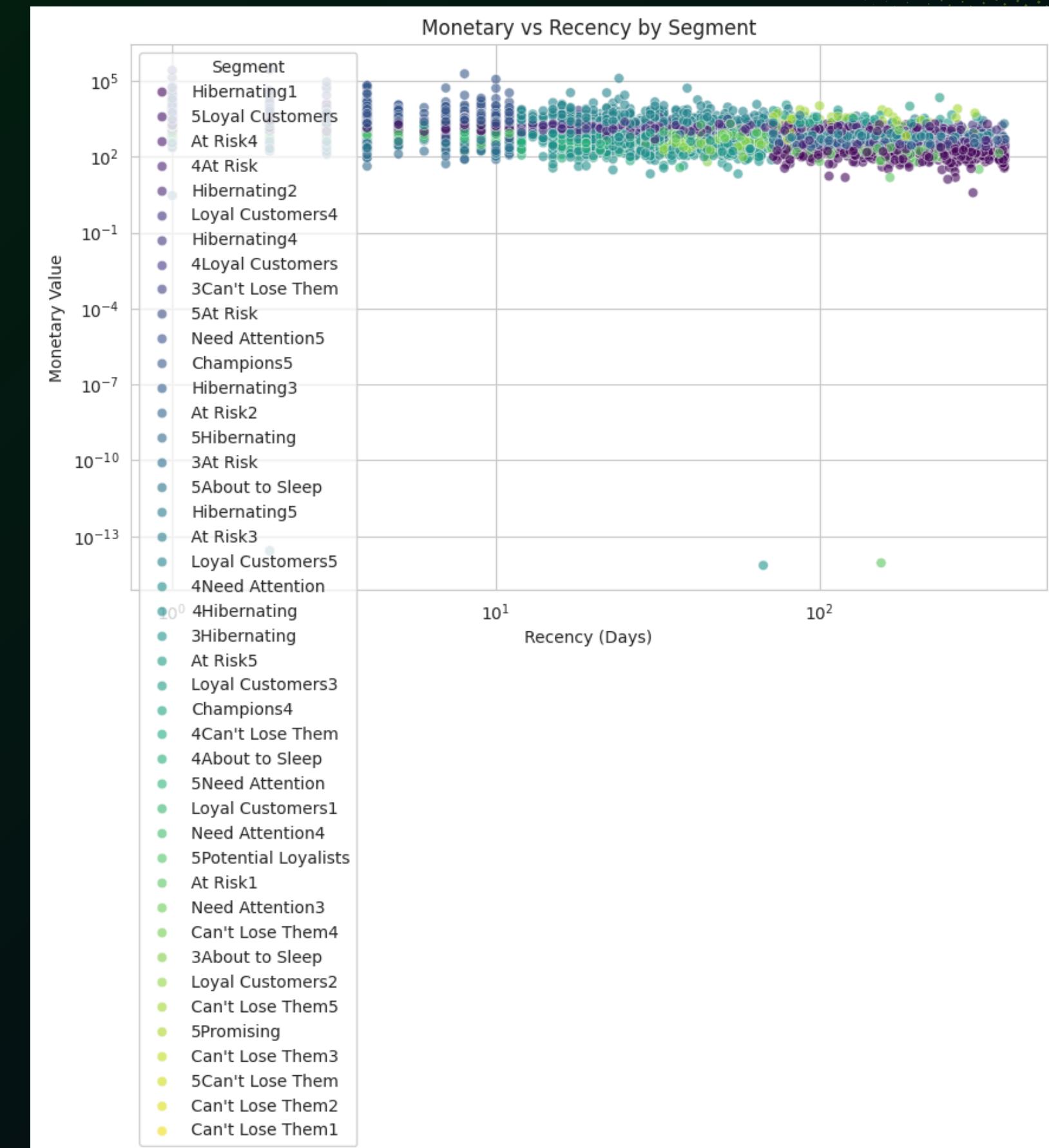




VISUALIZING RFM SEGMENTS

Monetary vs Recency

This plot illustrates the total amount spent (Monetary) against Recency. Customers with high Monetary value and low Recency (recent spenders) are your top-value customers contributing the most revenue recently. Those with low Monetary value but also low Recency may be new customers or bargain shoppers. High Recency with low Monetary indicates customers who have not purchased recently and have low historical spend, suggesting a priority for win-back efforts or resource minimization.

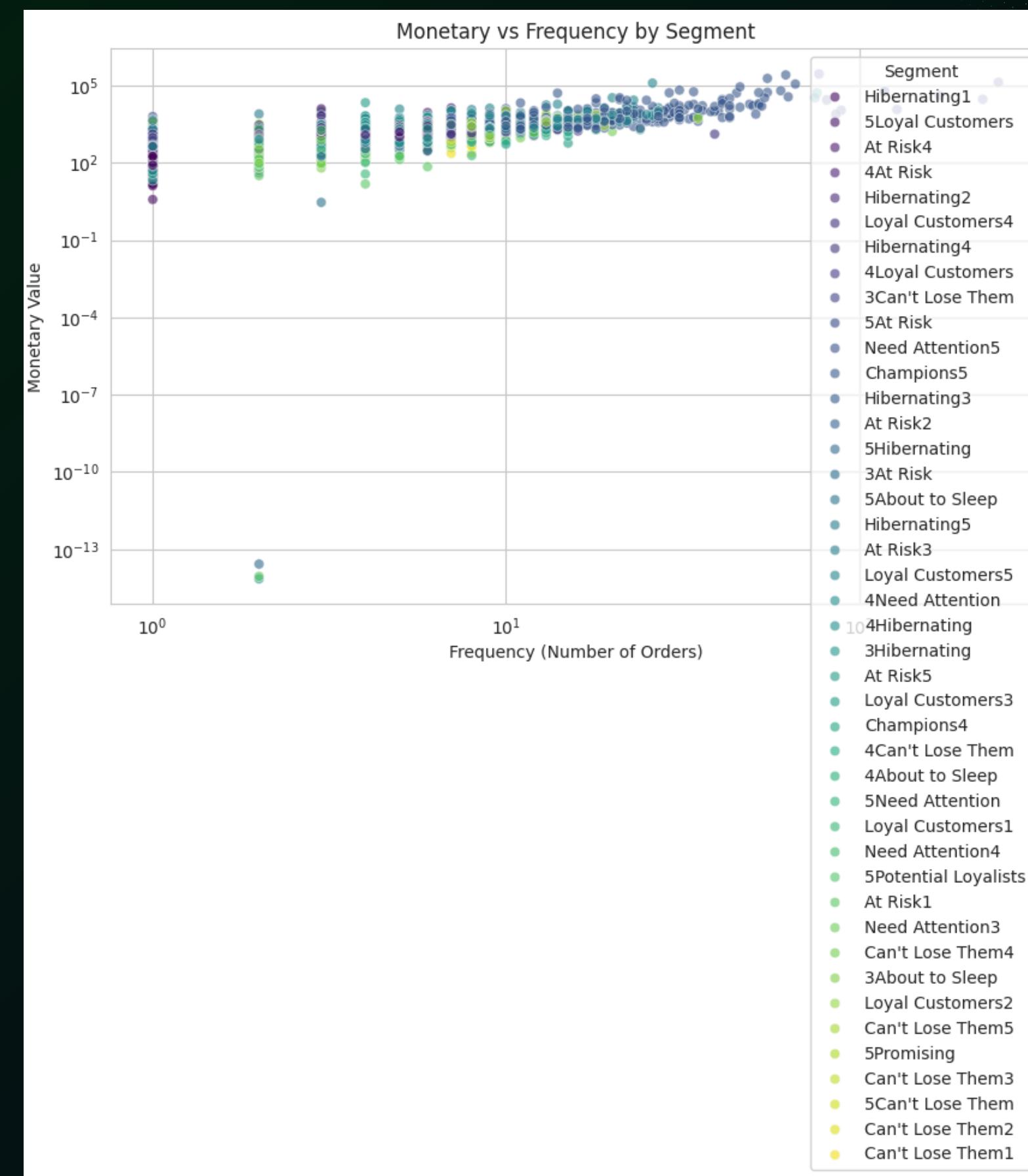




VISUALIZING RFM SEGMENTS

Monetary vs Frequency

This plot highlights the relationship between how much customers spend (Monetary) and how often they purchase (Frequency). A positive correlation is usually expected: customers who buy more frequently tend to spend more overall. Customers with high Frequency but relatively low Monetary could indicate bargain buyers who purchase often but in small amounts. Conversely, high Monetary and low Frequency customers may be impulse or high-value buyers, who could be encouraged to increase purchase frequency through targeted incentives.





KEY INSIGHTS :

01

The RFM analysis effectively segmented customers into groups such as Champions, Loyal Customers, At Risk, and Hibernating, revealing distinct purchasing behaviors.

02

Champions are recent, frequent buyers with high spending, representing the most valuable customers to prioritize.

03

Loyal Customers demonstrate consistent buying patterns and contribute steadily to revenue.

04

At Risk and Hibernating segments include customers with declining purchase frequency and recency, indicating potential churn risks.

05

Visualizations (bar charts, heatmaps, and scatter plots) confirm that Recency, Frequency, and Monetary values vary significantly across segments, validating the segmentation approach.





MARKETING RECOMMENDATIONS :

01

Champions: Reward with exclusive offers, early access to new products, and loyalty programs to reinforce their engagement.

02

Loyal Customers: Provide personalized discounts and upselling opportunities to encourage higher spending.

03

Potential Loyalists: Engage with targeted campaigns that highlight the benefits of increased purchase frequency.

04

At Risk: Implement re-engagement strategies such as reminder emails, special discounts, and targeted promotions to win them back.

05

Hibernating: Use win-back offers and personalized outreach to reactivate these inactive customers.





CONCLUSION :

The RFM-based segmentation provided actionable insights into customer behavior, enabling tailored marketing strategies geared towards maximizing customer lifetime value. By identifying key customer groups and their characteristics, businesses can focus efforts on nurturing high-value customers and reactivating inactive ones. Future steps include continuous monitoring of customer segments, refining scoring models, and incorporating additional data sources for deeper personalization and improved ROI.



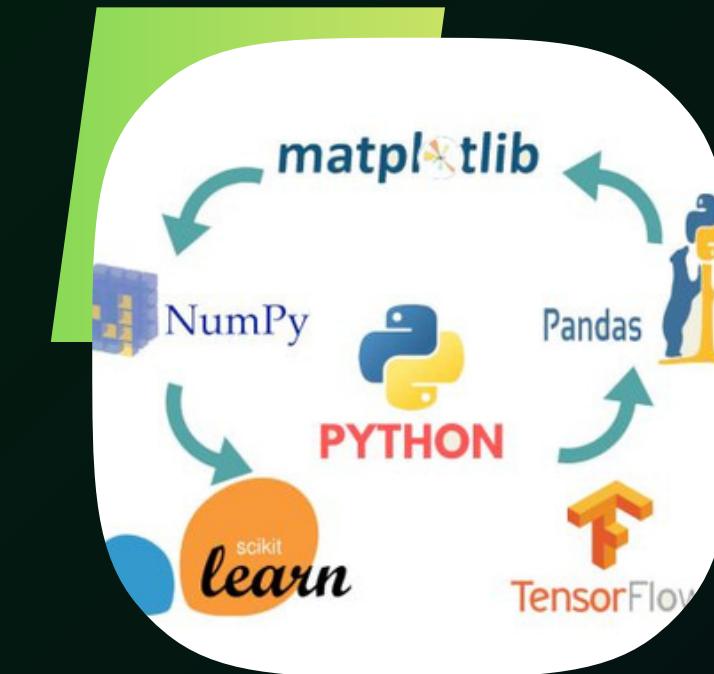


TOOLS USED



Google Colab

For data loading, cleaning, feature engineering, performing RFM analysis, and creating visualizations using Python libraries like Pandas and Seaborn.



Python Libraries

Used within Google Colab for data manipulation, analysis, scoring, segmentation, and generating charts like bar plots, heatmaps, and scatter plots.



Canva

For designing and editing your presentation or report PDF with a professional, visually appealing layout.



LET'S CONNECT!

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THANK YOU
