5.   RFM ANALYSIS

RFM analysis is a powerful technique used by businesses to segment and understand customer behavior based on their transactional data. RFM stands for Recency, Frequency, and Monetary Value, which are three key dimensions used to evaluate and segment customers. It provides valuable insights into customer engagement and loyalty, and helps businesses identify and prioritize different customer segments for targeted marketing efforts, personalization, and retention strategies.

5.1.   APPROACH

The analysis performed delving into three key dimensions of customer behavior:

- Recency (how recently a customer has made a purchase)

Recency for each customer is calculated by measuring the time between the most recent transaction date from the dataset and the date of the last customer`s transaction.

- Frequency (how frequently a customer makes purchases)

Frequency is determined by counting the total number of transactions each customer has made over a period of analysis.

- Monetary (how much monetary value a customer contributes)

Monetary value is calculated by summing the total spending of each customer.

Each described dimension is divided into quartiles to create segments based on distribution. Customers are ranked and assigned quartile scores from 1 to 4, with 4 being the highest score representing the most recent, frequent, or valuable customers accordingly. The individual R, F, and M scores are combined to create an RFM score.

By determining RFM scores through this approach, businesses gain a comprehensive understanding of customer engagement and value, enabling them to make informed decisions and implement strategies that drive customer loyalty, retention, and overall business success.

5.2.   INSIGHTS AND RECOMMENDATIONS

Customers are segmented based on their RFM scores, resulting in distinct groups that represent varying levels of engagement and value. These segments provide insights into customer behavior and preferences, helping tailor marketing and engagement strategies.

The RFM matrix followed by RFM distributions are presented in the **Figure 11** below. The heatmap clearly highlights the distribution of customers across different Recency, Frequency, and Monetary score combinations. This segmentation provides a comprehensive view of customer behavior and engagement.
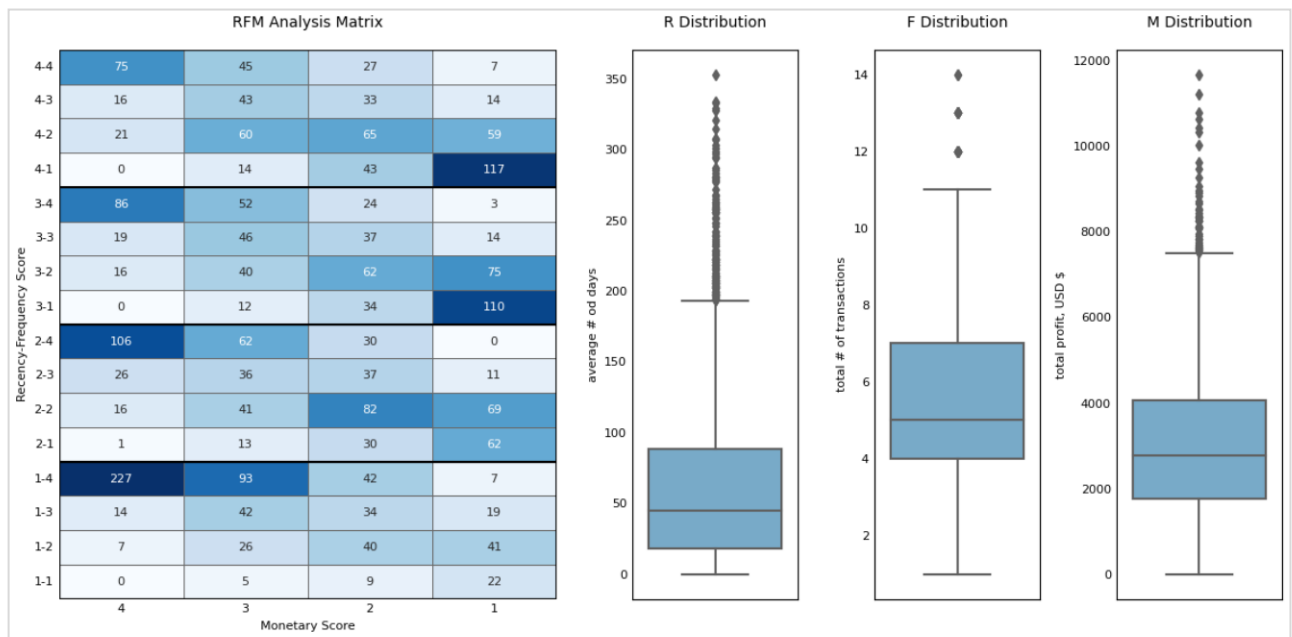
Figure 11 – RFM Matrix and Distributions

The following observations suggest interesting and valuable segments of customers:

- Segments 1-4-4 and 2-4-4 (13% of all customers)

These high-monetary customers might have made large purchases in the past on a regular-basis, indicating their loyalty and potential satisfaction with the products or services. However, their lack of recent transactions could indicate dormancy. It is highly recommended to develop a re-engagement strategy to reconnect with these dormant high-value customers based on the activities listed below.

Re-Engagement Strategy:
- sending personalized emails, offers, or promotions to encourage them to return and make new purchases;
- providing exclusive offers or discounts to entice these customers back;
- collecting feedback to identify any issues, concerns, or changes in customer`s preferences;
- designing win-back campaigns specifically targeted at this segment;

- Segments 3-1-1 and 4-1-1 (9% of all customers)

Customers in this segment have made recent transactions, but they do so infrequently and with relatively low monetary value. It is highly recommended to develop a strategy to encourage repeat transaction based on activities listed below:

Strategy to encourage repeat transaction:
- implementing personalized email campaigns to encourage making additional purchases sooner;
- offering loyalty rewards or discounts to incentivize these customers to make repeat purchases;
- providing tailored product recommendations that align with customers interests;
- introducing a membership program that offers benefits to members;
- creating time-sensitive promotions that encourage quick follow-up purchase;

It is recommended to develop targeted strategies based on the RFM segments to engage and retain customers effectively. The strategy must reflect directions for marketing campaigns, promotions, and personalized offers which are designed for each segment to optimize customer interactions.