

ENHANCING MARKETING STRATEGIES THROUGH RFM ANALYSIS at YEKA HERBALS

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Abstract: This case study explores the utilization of RFM (Recency, Frequency, Monetary) analysis for customer segmentation at Yeka Herbals Pvt Ltd, an Indian sustainable beauty brand. The study's objective was to refine marketing strategies and bolster sales by discerning customer segments based on transaction behaviour. The foundation of the investigation entailed RFM analysis, which delved into Recency, Frequency, and Monetary value metrics. This exploration aimed to uncover the distribution of RFM scores, the trajectory of monetary value trends, and the creation of customer clusters. Employing a sophisticated two-step clustering algorithm combining hierarchical and k-means methodologies, customer clusters were refined. This involved direct marketing initiatives, personalized campaigns, and optimized content delivery. Additionally, the company undertook eco-conscious packaging enhancements and introduced enticing combo offers. The RFM analysis-driven customer segmentation proved instrumental in guiding Yeka Herbals Pvt Ltd towards more effective marketing strategies, customer engagement, and sustainable product offerings. The study's outcomes underscore the potency of data-driven decision-making in fostering business growth and enhancing customer relationships.

Keywords: CRM, RFM Analysis, Clustering, Customer Segmentation, Marketing Strategies, Sustainable beauty products.

1. INTRODUCTION

Marketing is a dynamic and constantly changing field. New trends and emerging technologies can be used to market products and services. Marketing is the process of creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society. It includes all activities a company promotes and sells its products or services to consumers. YEKA herbals a manufacturing and marketing company thrives to adapt the changes to improve their sales and sustain in the beauty market. The statement of the problem focuses on the need to segment customers in the manufacturing sector using RFM

Analyses, identifies loyal and at-risk customers, assess the effectiveness of direct marketing strategies, and provide recommendations for sales improvement and targeted marketing efforts based on the analysis results. The statement of the problem also helps to ensure that the project is relevant and timely. The project is aligned with the YEKA Herbal's goal of improving sales and customer retention by targeting the right customer segments.. Additionally, the project is timely because it addresses the challenges that many businesses face in today's competitive markets.

A sustainable beauty company called YEKA looks beyond just making money. The headquarters of this business are in Chennai, and it was founded in 2018. The business is committed to supporting a healthy lifestyle and promoting natural products for various beauty needs while minimizing the use of chemicals. Yeka Herbals is an organization that specializes in creating and selling a broad selection of skincare and haircare items that are appropriate for people of all ages and genders. Some of their notable products include Yeka Moringa Hair Oil, Yeka Golden Glow Skin Oil, Yeka Kumkumadi Night Serum, and Mini Yeka Moringa Herbal Hair Oil. Two female business owners founded the company, and they are steadfastly committed to providing their clients with high-quality, all-natural beauty products. In order to support people in leading healthy lifestyles, it seeks to minimize the use of chemicals and promote natural products for all your beauty needs. They manufacture more than 30 products and market them online on various e-Commerce websites.

Customer Relationship Management (CRM) plays a crucial role in businesses in various industries. Customer Relationship Management (CRM) is a business strategy

that focuses on building and maintaining strong customer relationships. It involves collecting and analyzing customer data and using that data to improve customer service, sales, and marketing efforts. Customer Relationship Management (CRM) is a vital component of business operations that involves strategies, processes, and technologies aimed at nurturing customer relationships throughout their lifecycle. CRM systems centralize customer data for a comprehensive view, enhancing customer service by equipping teams with valuable insights and enabling efficient issue resolution. They facilitate customer segmentation for targeted marketing, streamline sales, lead management, and automate marketing campaigns, fostering increased sales and revenue. CRM systems improve communication with customers, boost retention rates through personalized engagement, and provide valuable analytics for informed decision making. Additionally, they streamline business processes, confer a competitive advantage through exceptional customer experiences, accommodate business growth, and ensure data security, ultimately driving revenue growth and adaptability under evolving market conditions.

1.2 Customer segmentation

Customer segmentation, which divides customers into various groups based on shared traits, behaviors, and preferences, is a crucial component of CRM. Due to this segmentation, firms are able to customize their marketing initiatives, communications, and services to meet the particular requirements of each consumer category. Companies can identify high-value consumers, predict customer behavior, and tailor their interactions by using CRM in customer segmentation, ultimately increasing customer pleasure, loyalty, and

long-term profitability. According to RFM study, successful CRM in customer segmentation enables firms to develop focused marketing efforts, provide individualized product suggestions, and deliver great customer experiences, all of which improve operations and boost customer acquisition and retention.

Previous research on CRM customer segmentation has yielded valuable insights into the strategies and techniques employed by businesses to categorize and effectively engage with their customer base. Studies have consistently emphasized the significance of segmentation in CRM, allowing organizations to tailor their marketing efforts, products, and services to meet the unique needs of distinct customer groups. Recency, Frequency, Monetary (RFM) analysis has been a widely studied and effective method for customer segmentation, enabling the identification of high-value customers and optimization of marketing budgets. Beyond RFM, behavioral segmentation has gained attention, enabling businesses to categorize customers based on their actions and preferences. Predictive analytics, personalization, and multichannel segmentation have also been key areas of focus, as they enhance customer relationships and satisfaction. Additionally, research has explored ethical considerations surrounding customer segmentation, emphasizing the importance of data privacy and fairness. Overall, prior research highlights the evolving nature of CRM customer segmentation in response to technological advances and the increasing importance of personalization and ethical practices in today's business environment.

Although traditional segmentation models have proven effective to a certain extent, they often rely on static customer groups

and may not adapt swiftly to evolving consumer behaviors and preferences. Real-time segmentation is essential in today's fast-paced business environment, in which customer actions and needs can change rapidly. Research in this area could focus on developing advanced segmentation models and algorithms that can continuously monitor and analyze customer data, allowing businesses to make timely adjustments to their marketing strategies, product offerings, and customer engagement tactics. Additionally, investigating the integration of dynamic factors, such as changing purchase patterns, online interactions, and emerging trends, into segmentation models can provide a more accurate and responsive understanding of customer behavior, ultimately leading to improved customer satisfaction and loyalty. This research avenue holds great potential for businesses seeking to stay ahead in a competitive landscape by tailoring their CRM efforts to the ever-changing dynamics of customer relationships.

1.3 Research Gap

A significant research gap in the realm of Customer Relationship Management (CRM) segmentation lies in the exploration of real-time and dynamic segmentation strategies. While traditional segmentation models have proven effective to a certain extent, they often rely on static customer groups and may not adapt swiftly to evolving consumer behaviors and preferences. Real-time segmentation is essential in today's fast-paced business environment, where customer actions and needs can change rapidly. Research in this area could focus on developing advanced segmentation models and algorithms that can continuously monitor and analyze customer data, allowing businesses to make timely adjustments to their marketing strategies, product offerings,

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Filling research gaps in Customer Relationship Management (CRM) segmentation involves multifaceted approaches to advance our understanding of customer behavior and optimize business strategies. Researchers address these gaps by conducting primary research, utilizing advanced analytics, and exploring real-world case studies. Collaboration between academia and industry, ethical considerations, and longitudinal studies are the essential components of this endeavor. Interdisciplinary collaboration and knowledge sharing across various fields contribute to a more holistic understanding of customer segmentation. Addressing emerging markets, the impact of AI and automation, and benchmarking practices across industries are key aspects of research. By adopting these strategies, researchers aim to provide businesses with actionable insights to enhance their CRM practices, adapt to changing customer dynamics, and promote sustainable growth.

2. DATA COLLECTION AND PREPROCESSING

This phase plays a pivotal role in dataset preparation for analysis. Data were collected from various sources, including e-commerce

platforms, social media sites, WhatsApp, and the company's website, and stored in Zoho Books. This two-year dataset, spanning January 1, 2021, to December 31, 2022, forms the foundation of the analysis.

Several crucial steps were performed during data preprocessing. Data cleaning involved identifying and rectifying errors such as missing values, formatting inconsistencies, and duplicate records. Integration ensured that data from different sources converged into a unified dataset. Data transformation makes the dataset suitable for analysis by altering data types, scaling values, and encoding categorical variables. Data reduction streamlines the dataset by eliminating redundant or irrelevant information. After completing the data preprocessing phase, the dataset consisted of 30,078 samples. The selected columns for further analysis include the dates of the transactions, customer names, and transaction amounts. This streamlined dataset, with its focus on transaction-related information, is now well prepared for the subsequent stages of RFM analysis and customer segmentation. Analyzing these key elements will enable us to gain valuable insights into customer behavior and contribute to the project's overall objectives.

By meticulously addressing these aspects, we ensured that the dataset used for RFM analysis and customer segmentation was accurate, comprehensive, and appropriately structured, setting the stage for meaningful insights and recommendations in the project. Data preprocessing is a crucial step in any data science project as it ensures data quality and suitability for analysis. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, in different business, Science and social science domains. In today's business world, data analysis plays a

role in making decisions more scientific and helping businesses operate more effectively.

3. METHODOLOGY

RFM analysis uses three metrics to categorize customers: recency, frequency, and monetary value. RFM analysis is a powerful technique for customer segmentation that helps businesses categorize their customer base into distinct groups based on their historical purchase behavior. Here, we discuss how RFM analysis works and contributes to effective customer segmentation.

Recency (R): Recency measures how recently a customer has made a purchase. It focuses on the time elapsed since a customer's last transaction.

Frequency (F): Frequency measures how often a customer purchases over a specific period of time.

Monetary (M): Monetary represents the total amount of money a customer spends on purchasing over a specific period.

The highest RFM score was 555 and the lowest score was 111.

A two-step clustering algorithm is a clustering algorithm consists of two phases.

Preliminary clustering: In this phase, the data are clustered into a small number of clusters, typically by using a hierarchical clustering algorithm.

Fine-tuning: In this phase, the clusters from the preliminary clustering are refined using a non-hierarchical clustering algorithm such as k-means clustering.

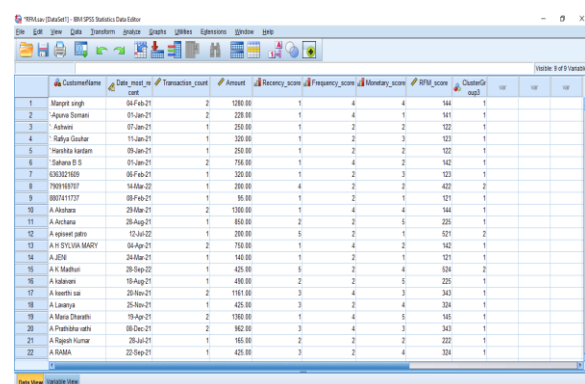
A two-step clustering algorithm can be used to improve the performance of clustering algorithms by combining the strengths of hierarchical and non-hierarchical clustering. Hierarchical clustering is good at finding clusters of different sizes and shapes, whereas non-hierarchical clustering is good at finding clusters that are compact and well-separated. Two-step clustering algorithms are frequently used to cluster high-dimensional or noisy data.

The image shows that the data points were grouped into three clusters.

Cluster 1: This cluster contains customers who have made recent purchases, make frequent purchases, and spend a lot of money. These customers were considered loyal.

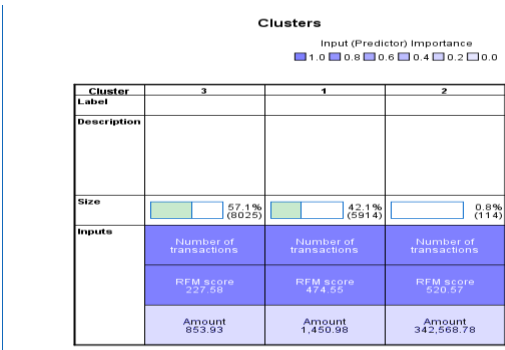
Cluster 2: This cluster contains customers who have made recent purchases, but do not make frequent purchases or spend a lot of money. These customers are considered to be promising.

Cluster 3: This cluster contains customers who have not made recent purchases, do not make frequent purchases, and do not spend much money. These customers are considered at risk.



	CustomerName	Date	Transaction count	Amount	Recency score	Frequency score	Monetary score	RFM score	Cluster Group
1	Mangal Singh	04-Feb-21	2	1200.00	1	4	4	144	1
2	Alpina Suman	01-Jan-21	2	220.00	1	4	1	141	1
3	Poojara	01-Jan-21	1	250.00	1	2	2	122	1
4	Rajya Sankar	11-Jan-21	1	300.00	1	2	3	123	1
5	Hanisha Kandan	09-Jan-21	1	250.00	1	2	2	122	1
6	Sahana B S	01-Jan-21	2	750.00	1	4	2	142	1
7	CHINMAYAN	05-Feb-21	1	200.00	1	2	3	123	1
8	760160107	14-Mar-22	1	200.00	4	2	2	402	2
9	880741157	08-Feb-21	1	95.00	1	2	1	121	1
10	A. Akshara	29-Mar-21	2	1300.00	1	4	4	144	1
11	A. Anshika	20-Aug-21	1	800.00	2	2	5	225	1
12	A. Anshika	12-Jul-22	1	200.00	5	2	1	121	2
13	A. H. DIVYA MARY	04-Apr-21	2	750.00	1	4	2	142	1
14	A. Jothi	24-Mar-21	1	140.00	1	2	1	121	1
15	A. K. Mahesh	20-Sep-21	1	420.00	1	2	4	124	2
16	A. Lakshmi	10-Aug-21	1	400.00	2	2	5	225	1
17	A. Lakshmi	20-Nov-21	2	1100.00	3	4	3	343	1
18	A. Lakshmi	25-Nov-21	1	420.00	3	2	4	324	1
19	A. Lakshmi	10-Aug-21	2	1200.00	1	4	5	145	1
20	A. Lakshmi	08-Dec-21	2	900.00	3	4	3	343	1
21	A. Lakshmi	20-Jul-21	1	150.00	2	2	2	222	1
22	A. Lakshmi	20-Sep-21	1	420.00	3	2	4	324	1

The results of the cluster analysis indicate that companies should focus on retaining and growing Loyal and Promising. The company can do this by offering discounts, coupons, or loyalty programs. The company can also target customers through more advertising. The company should also consider making changes to the advertisement to appeal to the specific needs and interests of the Loyal and Promising. The advertisement can be targeted to specific channels that are more popular with these customers. The advertisement can also be placed in more prominent locations frequented by these customers.



Limitation of RFM

Recency, Frequency, Monetary (RFM) analysis, a valuable tool for customer segmentation and targeting, has several limitations that businesses should consider. First, it offers a simplistic view of customer behavior by focusing solely on three dimensions: recency, frequency, and monetary value. This may not capture the full spectrum of customer engagement. Second, RFM assigns equal weights to these dimensions, which may not reflect their true importance in a particular context. Additionally, RFM is retrospective and may not accurately predict future behavior. It also heavily emphasizes recent transactions, potentially overlooking long-term customer

value. Data quality and completeness are critical because missing or inaccurate data can skew results. Segmentation generated by RFM may not always lead to actionable strategies, and there can be significant heterogeneity within the segments. Moreover, RFM struggles to capture multichannel behavior and dynamic shifts in customer preferences. It lacks the ability to explain why customers behave as they do and may be less effective in niche or specialized markets. Ultimately, RFM's suitability of RFM depends on a business's specific goals, and it is often complemented with other data-driven approaches to provide a more comprehensive understanding of customers.

4. Findings

The findings reveal key insights into the customer segmentation and marketing strategies. Notably, 57.1% a significant portion of customers falls into the "Loyal" category, indicating the success of the company in retaining its most valuable clientele. Additionally, 42.1% of a substantial number of customers are categorized as "Promising," offering an opportunity to convert them into long-term loyal customers through tailored engagement efforts. The effectiveness of the Direct Marketing approach is underscored by a high percentage of loyal customers, highlighting its importance in customer retention. However, a noteworthy concern is the poor transaction rates observed among more than 60% of customers, signaling the need for strategies to boost customer engagement and encourage more frequent transactions in this segment. Based on these findings, there is an opportunity to reallocate marketing efforts. Emphasizing and expanding direct marketing strategies that have proven successful for loyal customers can further solidify customer retention.

Simultaneously, strategies should be devised to reengage and convert promising customers into the loyal category. Moreover, exploring avenues to reduce dependency on point-of-sale transactions, such as online sales channels, can enhance market reach and mitigate risks associated with a single sales channel. In summary, the findings suggest that while the company has effectively retained a substantial base of Loyal customers, there is room for growth and improved transaction rates. Strategic adjustments in marketing and sales approaches, as indicated by this analysis, can lead to enhanced customer segmentation and overall business success.

5. Implementation and Deployment

To enhance its marketing strategies and boost sales, the company should concentrate primarily on retaining and nurturing its customer segments. This can be achieved through various means such as offering exclusive discounts, coupons, or loyalty programs tailored to these customer groups. Additionally, targeted advertising campaigns should be designed to align with the specific needs and interests of these valuable segments. These advertisements can be strategically placed in locations frequented by Loyal and Promising customers and optimized for popular channels.

To further improve the effectiveness of its advertising efforts, a company should invest in comprehensive customer research to gain a deeper understanding of customer preferences. These data can then be used to refine and personalize advertisements to resonate better with the target audience. A/B testing of different advertisement versions can help identify the most effective approaches, while rigorous tracking and analysis can gauge advertisement performance. Exploring additional

marketing channels, such as email marketing, social media marketing, and public relations, can diversify a company's outreach efforts.

Companies can consider several approaches in terms of implementation and deployment strategies to enhance sales. Implementing a Customer Relationship Management (CRM) system can streamline customer interactions, lead management, and personalize marketing campaigns, ultimately improving customer satisfaction and loyalty. A marketing automation platform can automate repetitive tasks, such as email campaigns and social media posts, freeing up resources to focus on generating new leads and closing deals.



Moreover, creating a well-structured content marketing strategy can attract and engage new and existing customers. This can involve producing informative content, such as blog posts, info graphics, and e-books that cater to the target audience's interests and needs. Running paid advertising campaigns through platforms such as Google AdWords and Facebook allows for precise targeting based on demographics and behaviors.

Optimizing a company's website for search engines (SEO) is vital to increase online visibility and reach potential customers actively searching for similar products or services. Offering discounts and promotions can incentivize both new and existing customers to make purchases and foster loyalty. Participation in industrial events provides networking opportunities and a platform to promote products and generate leads. Lastly, forming strategic partnerships with complementary businesses can expand a company's reach and create cross-promotional opportunities.

By strategically implementing these recommendations, a company can optimize its marketing efforts, enhance customer relationships, and drive sales growth effectively.

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