CUSTOMER SEGMENTATION DASHBOARD USING RFM ANALYSIS IN EXCEL

1.Background and Problem Statement:

A mid-sized e-commerce apparel business struggled with generalized marketing campaigns that did not yield consistent customer retention. Despite a growing customer base, the company lacked a structured way to categorize customers based on purchasing behavior. They wanted an Excel-based solution to segment customers using Recency, Frequency, and Monetary (RFM) values and visualize the segments in an interactive dashboard for targeted marketing decisions.

2.Objectives:

- To calculate RFM scores for all customers using Excel formulas

- To segment customers into five tiers based on their RFM profile

- To build an interactive dashboard summarizing segment metrics and customer distribution

- To guide campaign targeting based on segment insights

3.Methodology:

3.1 Data Preparation:

- Dataset included 9,247 customer transactions from Jan 2021 to Dec 2022

- Fields used: Customer ID, Order Date, Order Amount

- Cleaned duplicates, standardized date formats, and removed refunded orders

3.2 RFM Calculation in Excel:

- **Recency:** Days since last purchase, calculated using TODAY() minus MAX(Order Date)

- **Frequency:** Number of orders per customer using COUNTIFS()

- **Monetary:** Total amount spent by each customer using SUMIFS()

- Assigned 1 to 5 scores for each R, F, M metric using QUARTILE distribution

- Generated RFM score by concatenating R, F, M scores (e.g., 531, 155, etc.)

3.3 Customer Segmentation Logic:

- Created five segments:

    o **Champions:** RFM score combinations with all metrics ≥ 4

    o **Loyal Customers:** High Frequency and Monetary, Recency moderate

    o **At Risk:** Low Recency, moderate Frequency and Monetary

    o **New Customers:** High Recency, low Frequency and Monetary

    o **Hibernating:** Lowest values across all metrics

3.4 Dashboard Creation:

- Used PivotTables and slicers for filtering by segment and month

- Inserted dynamic charts showing:

    o Revenue contribution by segment

    o Customer count per segment

    o Average order value per segment

- Applied conditional formatting to highlight trends

4.Key Features of the Excel Model:

- Fully dynamic RFM calculator that updates with new transactions

- Predefined segments auto-classified using nested IF formulas

- Clean, tab-based layout separating raw data, RFM scores, and dashboard

- Interactive controls to explore segments by month, region, or marketing campaign

5.Results and Benefits:

- Identified that "Champions" contributed 37% of total revenue with only 11% of the customer base

- "At Risk" and "Hibernating" segments had lowest repeat rate but high first-time order value

- Enabled the company to launch a reactivation email campaign targeting "At Risk" customers

- Improved targeting of loyalty rewards to "Loyal Customers" led to 12% increase in repeat orders over 3 months

6.Deliverables:

- Excel file with dynamic RFM engine and segmentation dashboard

- Documentation sheet explaining formulas and how to refresh with new data

- One-page executive summary with insights and action items

7.Stakeholder Relevance:

Academic:

- Great practical example for teaching RFM segmentation, customer analytics, and dashboarding

- Useful in courses on marketing analytics, data-driven decision-making, or CRM

Corporate:

- Directly applicable to retail and e-commerce brands looking to adopt Excel-based CRM segmentation

- Provides scalable structure for sales and campaign strategy planning without new software