RFM Analysis

RFM analysis - RFM analysis is a marketing technique used to quantitatively rank and group customers based on the recency, frequency and monetary total of their recent transactions to identify the best customers and perform targeted marketing campaigns.

RFM analysis is based on the marketing adage that "80% of your business comes from 20% of your customers."

RFM analysis ranks each customer on the following factors:

- **Recency.** How recent was the customer's last purchase? Customers who recently made a purchase will still have the product on their mind and are more likely to purchase or use the product again. Businesses often measure recency in days. But, depending on the product, they may measure it in years, weeks or even hours

- **Frequency.** How often did this customer make a purchase in a given period? Customers who purchased once are often are more likely to purchase again. Additionally, first time customers may be good targets for follow-up advertising to convert them into more frequent customer

- **Monetary.** How much money did the customer spend in a given period? Customers who spend a lot of money are more likely to spend money in the future and have a high value to a business.

RFM Analysis principal

- RFM analysis scores customer on each of three main factors. A score from 1-4 and 1 is the highest
- Collection of three factor called RFM class

Segmentation of customers using RFM analysis

RFM analysis is a powerful tool in marketing that helps marketers make the best of their advertising budget

- RFM analysis to identify clusters of customers with similar values, called segmentation of customer
- To perform RFM analysis, we divide customers into four equal groups according to the distribution of values for recency, frequency, and monetary value

- Four equal grp based on Interquartile range

Recency (R)	Frequency (F)	Monetary Value (M)
Quartile 1 (R=1)	Quartile 1 (F=1)	Quartile 1 (M=1)
Quartile 2 (R=2)	Quartile 2 (F=2)	Quartile 2 (M=2)
Quartile 3 (R=3)	Quartile 3 (F=3)	Quartile 3 (M=3)
Quartile 3 (R=4)	Quartile 3 (F=4)	Quartile 3 (M=4)

Example, customer who

- is within the group who purchased most recently (R=1),
- is within the group who purchased most quantity (F=1),
- is within the group who spent the most (M=1)
- customer belongs to RFM segment 1-1-1 (Best Customers=Platinum), (R=1, F=1, M=1)

Observation

Segment	RFM	Description	Marketing
Platinum Best	111	Most recently, most often and spend lots	Offers, New Products, loyalty programme
Loyal	X1X	Most recently	R &M further segment
Big Spenders	XX1	Spend more	Market expensive product
Gold	222	Recently, often and spend most time	Offers, New product
Silver	333	Haven't purchased for some time, but purchased frequently and spend the most	Aggressive price incentives
Bronze	444	Last purchase long ago, purchased few and spend little	Don't spend too much trying to re-acquire

Limitations

- RFM modelling can provide valuable insights about customers. But it does not take into account many other factors about the customer
- In-depth targeted marketing may also use type of item purchased or customer campaign responses as factors. Customer demographics such as age, sex and ethnicity are not covered in RFM analysis either
- RFM only uses historical data about customers and may not predict future customer activity.
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