

Business Intelligence
Analyst
Main Assessment

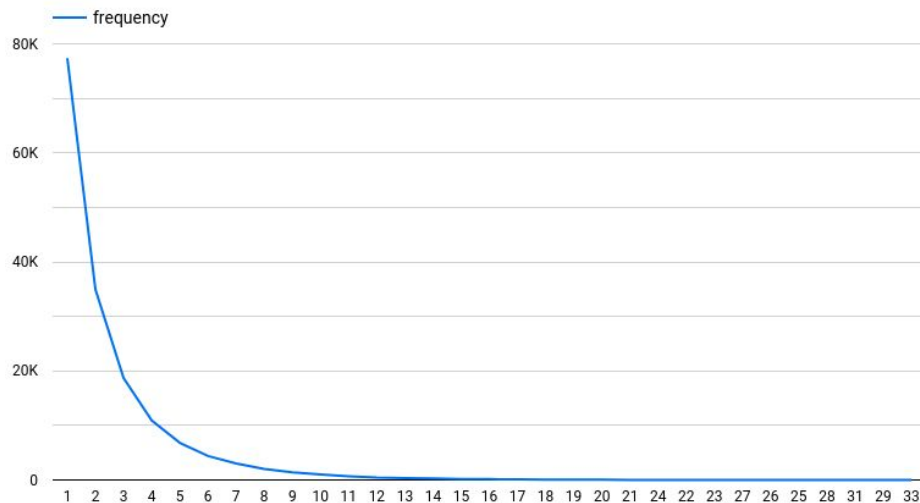


24/05/2021
Evangelia Santorinaïou

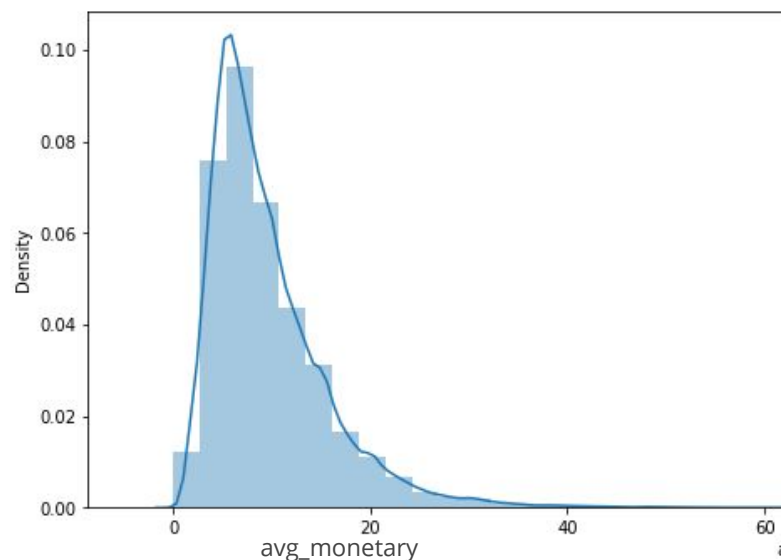
Jan 2021

(400.00 records)

1. Frequency per customer



2. Average Monetary

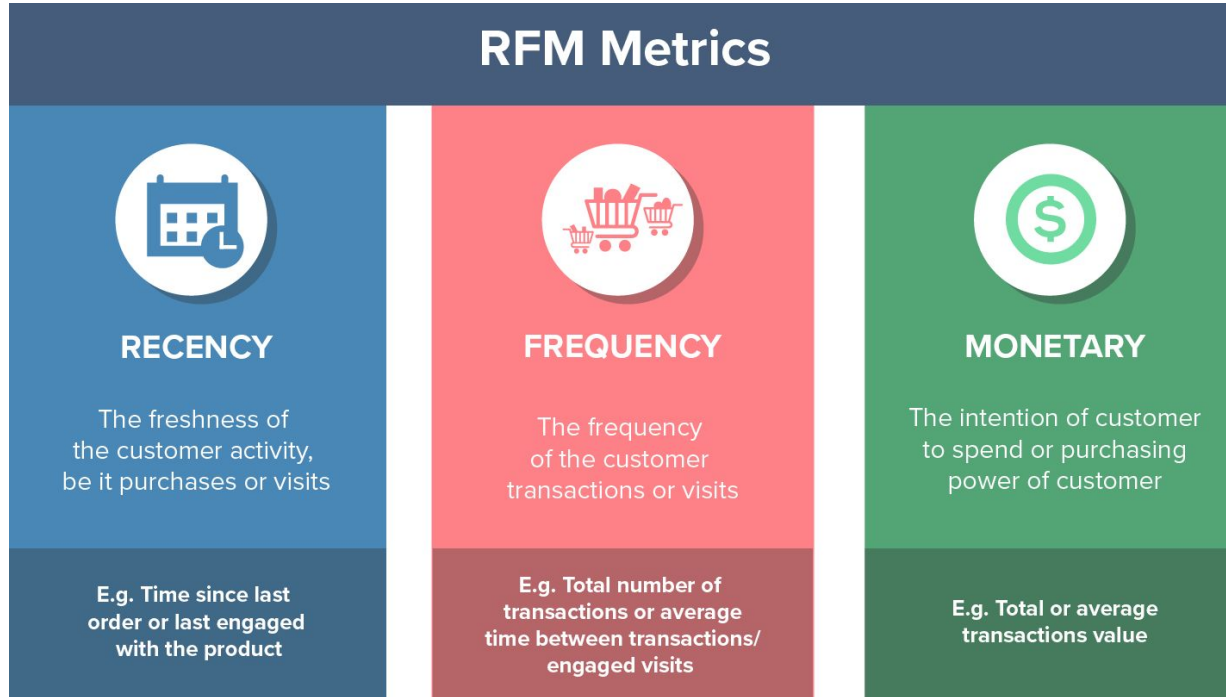


Note: Using average monetary as the total one already contains the frequency information

Customer Segmentation

1. Create homogeneous customer groups based on their behavior rather than on their age or their location
2. Understand their traits
3. Engage them with relevant campaigns

Recency Frequency Monetary (RFM) Model



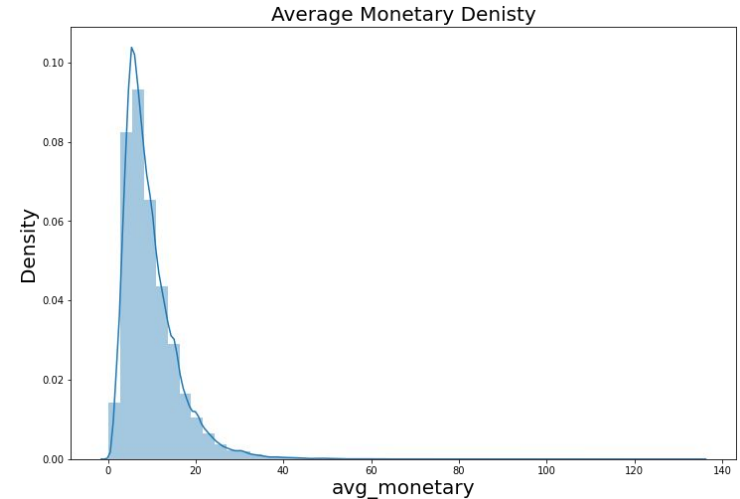
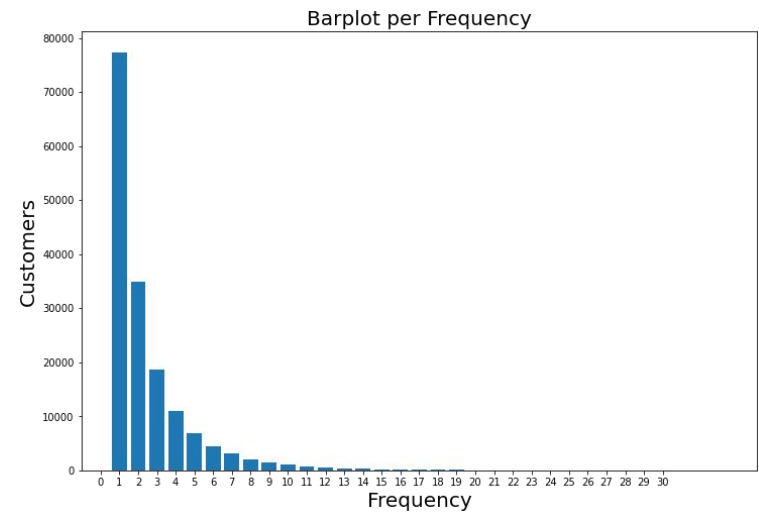
RFM

1. The more recent the order, the more responsive the customer is to promotions
2. The more frequently the customer orders, the more engaged he/she is
3. The monetary values differentiates heavy spenders from low-value orders

Main Idea: Rank each customer based on each RFM attribute separately and combine the ranks into customers categories with different behavior e.g Loyal, At Risk, Big Spender etc

RFM - Total Customers

- Recency attribute was not included to our analysis as we have only the January orders
- The distributions are rather skewed, thus the bin sizes should be chosen with care to be meaningful and reflect the expected customer behavior
- Resultantly, the bins for the frequency and monetary are:
 - Frequency: (0, 2] (2, 4] (6, 10] (10, 31]
 - Monetary: (0, 3] (3, 6] (6, 10] (15, 135]

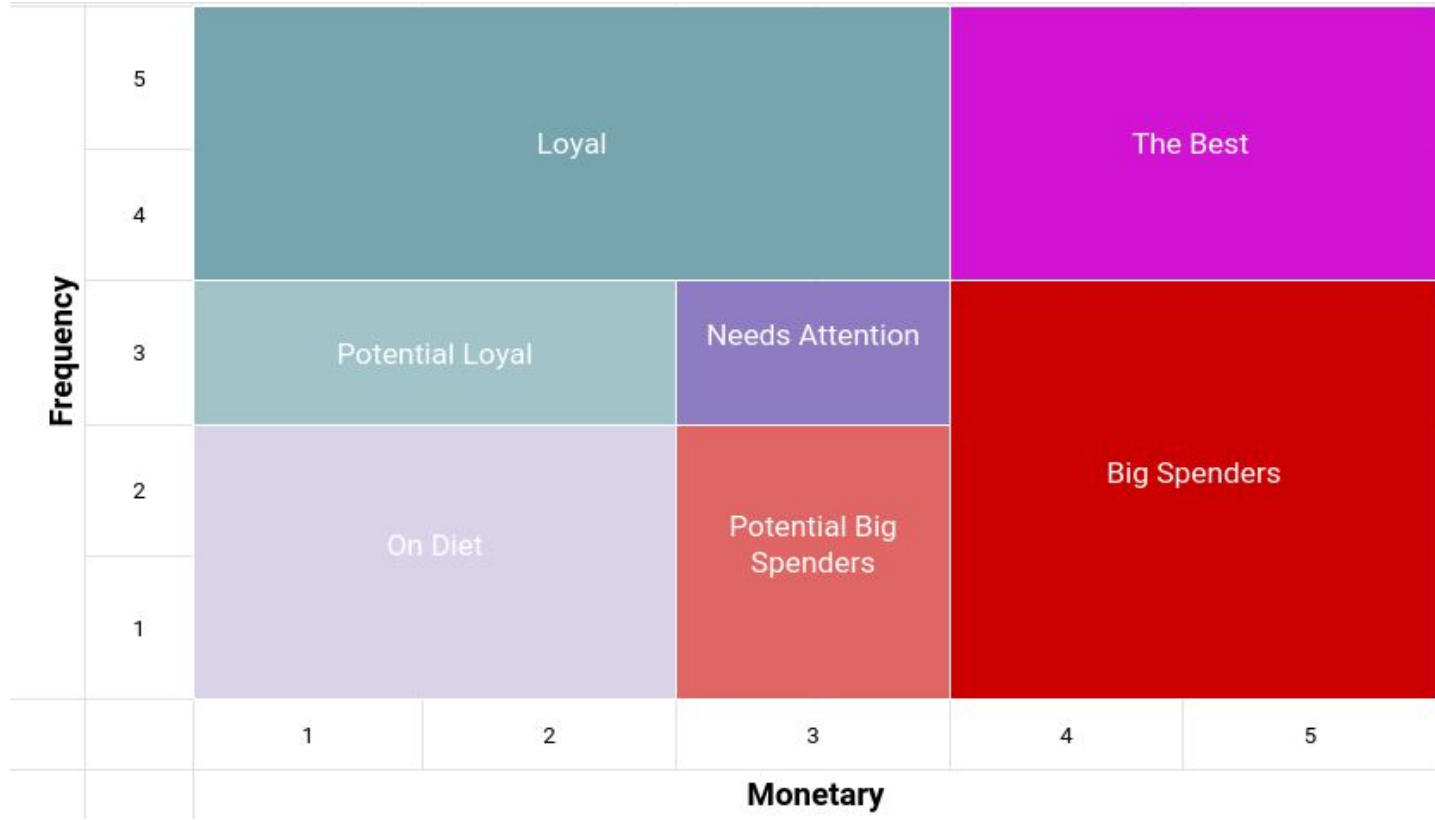


RFM- Total Customers

	user_id	frequency	monetary	avg_monetary	F	M	Concat_Segments
0	110800200	10	24.80	2.480000	4	2	42
1	117795512	7	17.00	2.428571	4	2	42
2	87030528	4	27.90	6.975000	2	3	23
3	113808278	2	4.34	2.170000	1	2	12
4	117942528	6	13.00	2.166667	3	2	32
5	192133628	6	15.10	2.516667	3	2	32
6	94817914	4	15.50	3.875000	2	2	22

Customer Segmentation

per frequency and avg monetary value



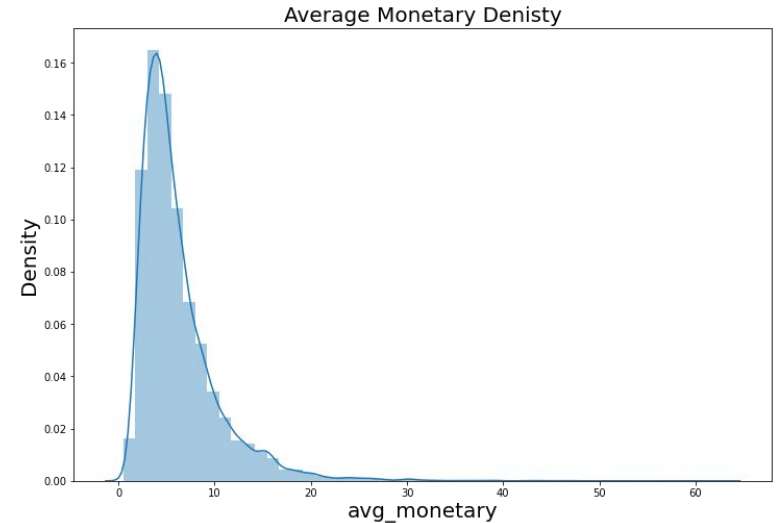
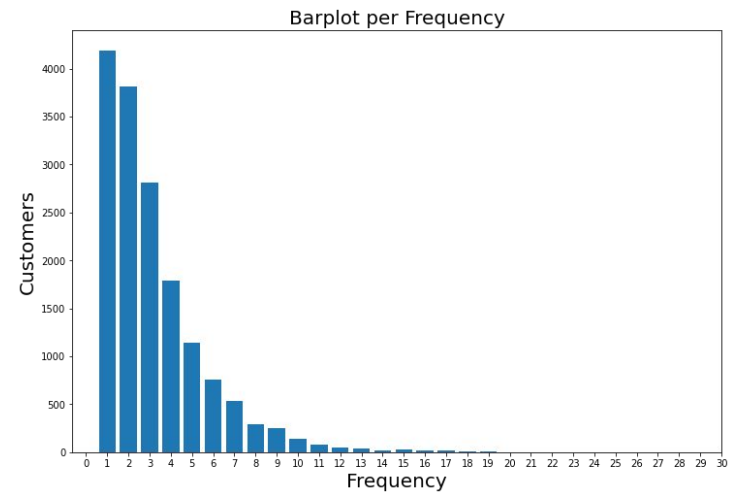
Treemap - Total Customer Segmentation

Customer Segmentation out of 162953



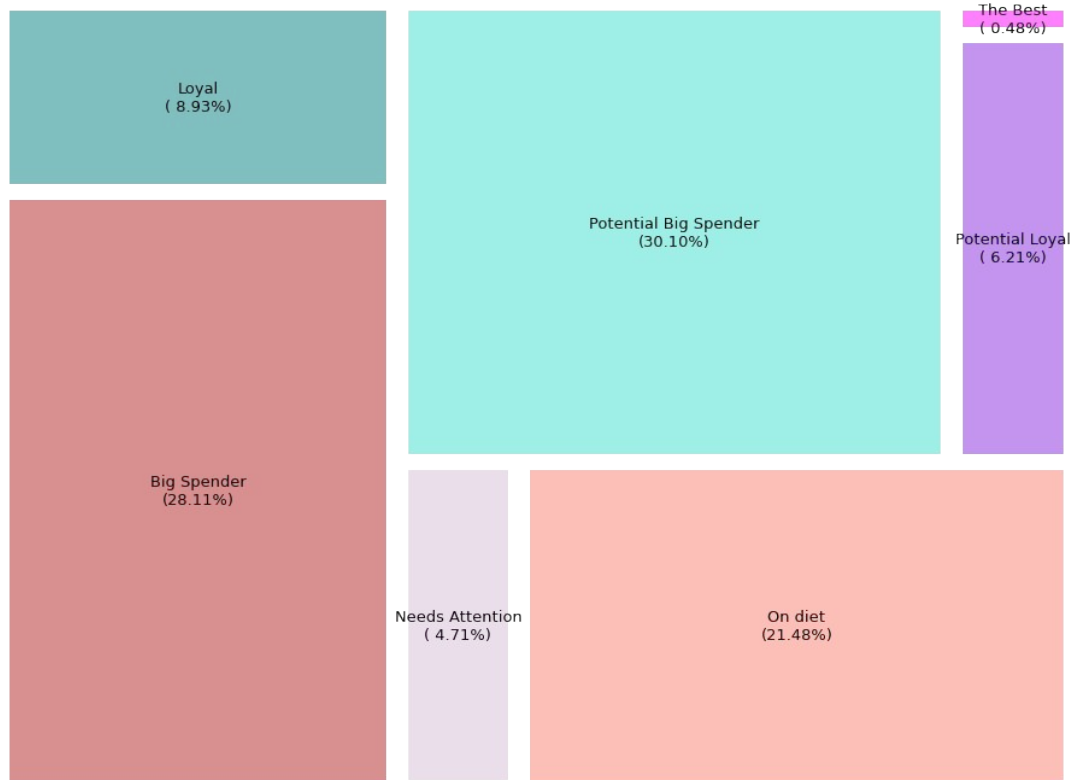
RFM-Breakfast

- The distribution of the breakfast subset were different, thus the bins are different as well
- Frequency bins: (0, 2] (2, 4] (6, 10] (10, 25]
Monetary bins: (0, 2] (2, 4] (4, 7] (15, 63]



Treemap - Breakfast Customer Segmentation

Customer Segmentation out of 15999



Coffee Campaign

- Target group: Users that are potentially loyal based on their order frequency and not on their spending
- Customers that have already high frequency like *The Best* category are engaged enough to not be included in the target group. On the other hand, customers with too low frequency like those *On diet* category are, as well, not likely enough to change their behavior due to their low activity
- *Potential Loyal* and *Needs Attention* are the target groups. 10.92% of the total breakfast customers

Segment	Monetary (EUR)
Big Spender	80.745
Loyal	47.314
Needs Attention	20.640
On diet	25.484
Potential Big Spender	64.526
Potential Loyal	15.893
The Best	5.396