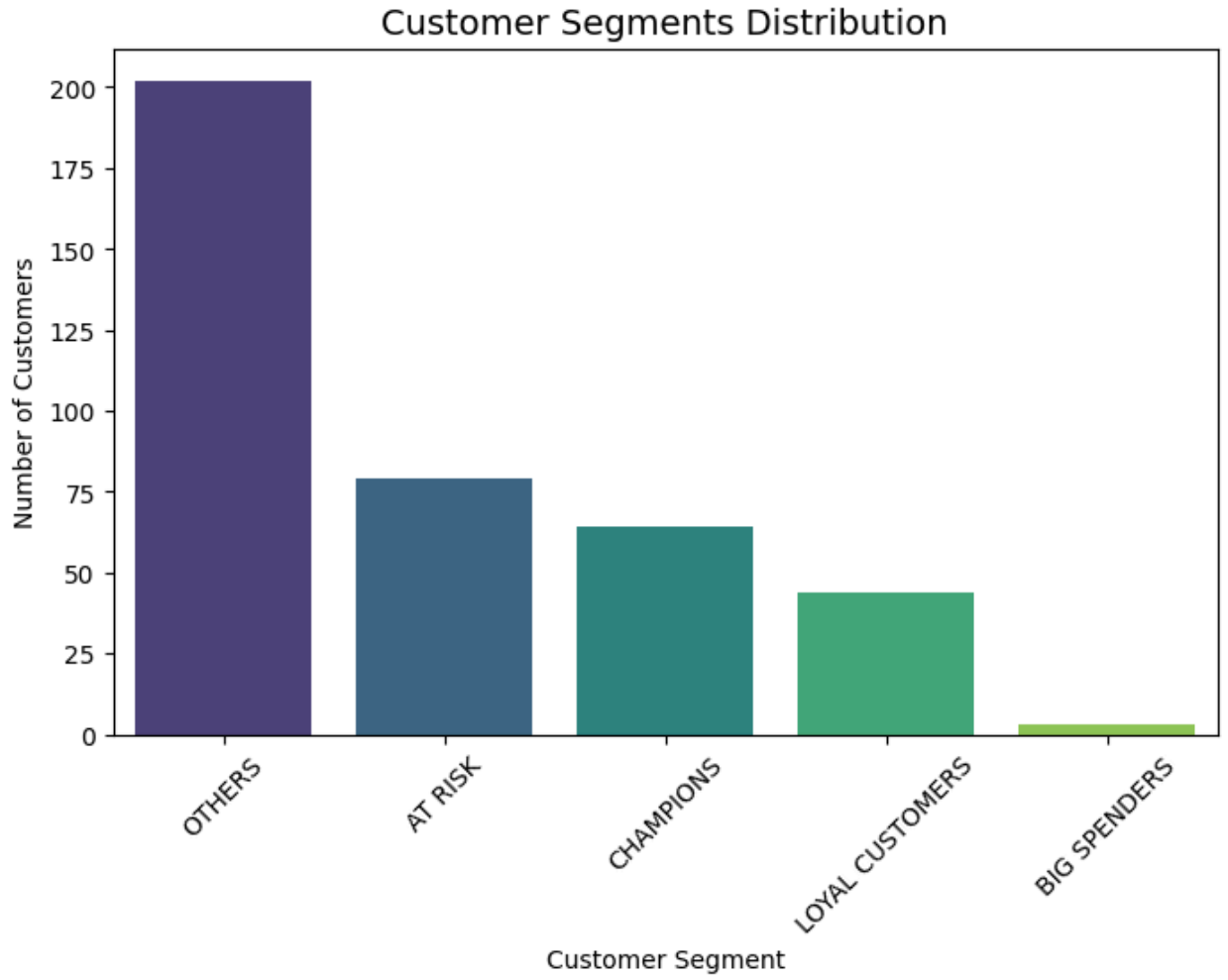
```
-RFM ANALYSIS
--RECENCY
WITH RECENCY AS
(
SELECT
CUSTOMER_ID,MAX(ORDER_TMS) LAST_ORDER,
EXTRACT(DAY FROM CURRENT_DATE - MAX(ORDER_TMS))  RECENCY
FROM CO.ORDERS
GROUP BY CUSTOMER_ID)

--FREQUENCY

,FREQUENCY AS
(
SELECT
   CUSTOMER_ID,COUNT(*) AS FREQUENCY
FROM CO.ORDERS
GROUP BY CUSTOMER_ID),

--MONETORY
MONETARY AS
(
SELECT
   CUSTOMER_ID,SUM(TOTAL_PRICE) AS REVENUE
FROM
(
SELECT
   C.CUSTOMER_ID,O.UNIT_PRICE,O.QUANTITY,(O.UNIT_PRICE*O.QUANTITY) TOTAL_PRICE
FROM CO.ORDERS C
LEFT JOIN CO.ORDER_ITEMS O
ON C.ORDER_ID=O.ORDER_ID
) T
GROUP BY CUSTOMER_ID),

--COMBINING RECENCY FREQUENCY AND MONETORY

COMBINE_DATA AS
(
SELECT
   R.CUSTOMER_ID,
   R.RECENCY,
   F.FREQUENCY,
   M.REVENUE
FROM RECENCY R
JOIN FREQUENCY F ON R.CUSTOMER_ID=F.CUSTOMER_ID
JOIN MONETARY M ON R.CUSTOMER_ID=M.CUSTOMER_ID
),

--CREATING BUCKET BASED ON RECENCY FREQUENCY AND MONETORY
```

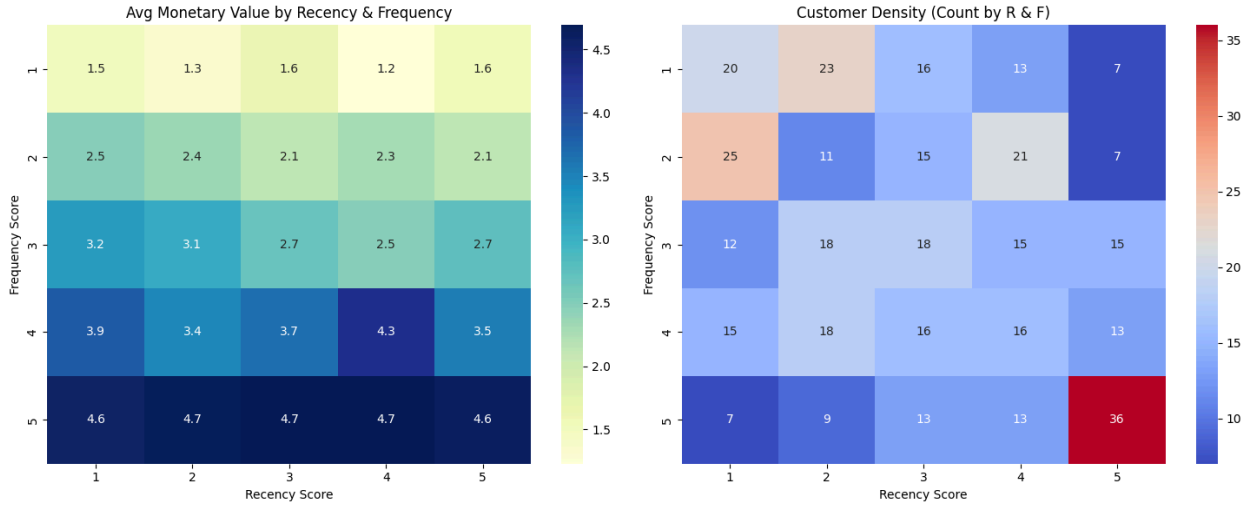
```
BUCKETS AS
(
SELECT CUSTOMER_ID,
NTILE(5) OVER (ORDER BY RECENCY) R_SCORE,
NTILE(5) OVER (ORDER BY FREQUENCY DESC) F_SCORE,
NTILE(5) OVER (ORDER BY REVENUE DESC) M_SCORE
FROM COMBINE_DATA
)
--SEGMENTING THE CUSTOMERS BASED ON SCORES
SELECT
    CUSTOMER_ID,R_SCORE,F_SCORE,M_SCORE,
    CASE WHEN R_SCORE>=4 AND F_SCORE>=4 AND M_SCORE>=4 THEN 'CHAMPIONS'
    WHEN R_SCORE>=4 AND F_SCORE>=3 THEN 'LOYAL CUSTOMERS'
    WHEN R_SCORE>=4 AND M_SCORE>=4 THEN 'BIG SPENDERS'
    WHEN R_SCORE<=2 AND F_SCORE<=2 THEN 'AT RISK'
    ELSE 'OTHERS' END AS SEGMENT
FROM BUCKETS
ORDER BY CUSTOMER_ID ASC;
```



"This bar graph shows how our customers are divided into different groups, or 'segments'. The height of each bar tells us how many customers are in that group.

Looking at the graph, we can see that the largest group is 'OTHERS', which has the most customers. There are also groups like 'AT RISK', 'CHAMPIONS', 'LOYAL CUSTOMERS', and 'BIG SPENDERS'. Each of these represents a different type of customer based on their behavior.

This helps us understand the makeup of our customer base and can guide us in deciding how to best engage with each segment."



"These two heatmaps provide insights into our customer base based on their Recency (how recently they purchased) and Frequency (how often they purchase) scores.

The heatmap on the left shows the average monetary value for each combination of Recency and Frequency scores. Darker shades indicate higher average spending. We observe that customers who purchased recently and frequently (high R and F scores) tend to have the highest average monetary value.

The heatmap on the right shows the density, or count, of customers for each Recency and Frequency combination. Warmer colors represent a higher number of customers in that segment. This heatmap reveals which R and F score combinations are most common in our customer base.

By looking at both heatmaps together, we can identify valuable customer segments (high monetary value) and understand where the majority of our customers fall in terms of their purchasing behavior."