Customer Segmentation

Supermarket

MY SQL CODE

```sql
create or replace model `crmtest-308203.supermarket.supermarket_ss_clusters`
OPTIONS(model_type='kmeans', num_clusters=5)
AS (
SELECT TOTAL_VISIT,
    TOTAL_SPEND,
    TOTAL_UNIT,
    TOTAL_SPEND/TOTAL_VISIT AS SPEND_PER_VISIT,
    TOTAL_UNIT/TOTAL_VISIT AS UNIT_PER_VISIT,
    TOTAL_PRODUCT/TOTAL_VISIT AS PROD_PER_VISIT
FROM (
    SELECT
        COUNT(DISTINCT BASKET_ID) AS TOTAL_VISIT,
        SUM(SPEND) AS TOTAL_SPEND,
        COUNT(DISTINCT PROD_CODE ) AS TOTAL_PRODUCT,
        SUM(QUANTITY) AS TOTAL_UNIT
FROM `crmtest-308203.supermarket.supermarket_ss`
WHERE CUST_CODE IS NOT NULL
GROUP BY CUST_CODE)
)
```

Let's see the results

Metrics

Davies–Bouldin index	0.9604
Mean squared distance	1.2038

Numeric features

This table shows the centroid value for each feature. Use the select menu to view more numeric features.

Selected Features
TOTAL_SPEND, TOTAL_UNIT, TOTAL_VISIT ▼

Centroid Id	Count	TOTAL_SPEND	TOTAL_UNIT	TOTAL_VISIT
1	686	132.7159	103.9102	2.6437
2	1,025	246.7299	192.0522	9.0716
3	415	1,382.9711	1,128.6822	11.3645
4	3,849	13.8926	10.4945	1.9255
5	125	3,936.9342	3,216.7462	12.7385

Numeric features

This table shows the centroid value for each feature. Use the select menu to view more numeric features.

Selected Features
PROD_PER_VISIT, SPEND_PER_VISIT, UNIT_PER_VISIT ▼

Centroid Id	Count	PROD_PER_VISIT	SPEND_PER_VISIT	UNIT_PER_VISIT
1	686	18.7746	47.2295	36.2464
2	1,025	7.7539	25.6057	19.8918
3	415	23.7683	124.2530	100.7292
4	3,849	3.0485	6.4965	4.9321
5	125	36.4564	309.2215	252.5566

DEAR CUSTOMERS

BLACK CARD

" Maintain & Pamper & Offer VVIP"

- 125 customers (2.05%)
- First runner visitors
- High willing&ability to pay
- Buy many products

PLATINUM CARD

" Offer X2 points& Up-sell "

- 415 customers (6.80%)
- Second runner visitors
- Spend medium per visit
- Buy various products

GOLD CARD

" Drive more visit & Cross-sell "

- 686 customers (11.25%)
- Less visit
- Small spending per visit
- Buy various products

CLASSIC CARD

" Offer easy&Hot Promotion to Up-sell "

- 1,025 customers (16.80%)
- Eye-shopping
- Hardly spend per visit
- Buy a few products per visit

DEBIT CARD

" Offer short-term promotion "

- 3,849 customers (63.10%)
- One-time visit customers
- Buy only necessary products