



HW 10

Customer Movement Analysis

BADS7105 – CRM Analytics and Intelligence
Watcharaphan Watcharanggurpipat

01

SQL Script running in Google Big Query

```
1 with customer as
2 (select distinct cust_code ,
3 DATE_TRUNC(PARSE_DATE("%Y%m%d", CAST(SHOP_DATE AS STRING)) , Month) as cur_month ,
4 from `hw-10-crm.supermarket.analysis`),
5 customer_month as
6 (
7 select cust_code, cur_month, LAG(cur_month,1) OVER (PARTITION BY cust_code ORDER BY cur_month) AS prev_month
8 FROM customer
9 ),
10 Report_cust1 as (
11 SELECT cust_code, cur_month , prev_month,
12 CASE WHEN DATE_DIFF (cur_month, prev_month, MONTH) = 1 THEN 'Repeat'
13      WHEN DATE_DIFF(cur_month, prev_month, MONTH) > 1 THEN 'Reactivated'
14      WHEN DATE_DIFF(cur_month, prev_month, MONTH) IS NULL THEN 'New' End as Status|
15 FROM customer_month
16 ),
17 Report_cust2 as (
18 select cust_code ,cur_month ,DATE_ADD(cur_month, INTERVAL 1 MONTH) as Future_month ,
19 case when cur_month <= (select MAX(cur_month) from customer) then 'Churn' end as status
20 from (
21 select cust_code , cur_month ,ROW_NUMBER() OVER ( PARTITION BY cust_code ORDER BY cur_month DESC ) as rwn
22 from customer) t where rwn = 1)
23
24
25 select cur_month ,status ,count(Cust_code) from(
26 select cust_code , cur_month , status
27 from Report_cust1
28
29 UNION ALL
30 select cust_code , Future_month , status
31 from Report_cust2 where Future_month <= (select MAX(cur_month) from customer) )
32
33 group by cur_month ,status
```

02 Example of result

Query results

[SAVE RESULTS](#)

Query complete (17.7 sec elapsed, 517.7 MB processed)

Job information Results JSON Execution details

Row	cur_month	status	f0_
1	2006-10-01	Reactivated	254
2	2007-11-01	Reactivated	401
3	2007-05-01	Repeat	885
4	2007-12-01	New	134
5	2006-05-01	Churn	76
6	2008-02-01	Reactivated	359
7	2008-02-01	Repeat	860
8	2007-07-01	New	190
9	2006-08-01	Repeat	887
10	2006-12-01	Reactivated	319
11	2006-10-01	New	255

Query results

[SAVE RESULTS](#)

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Job information Results JSON Execution details

12	2007-06-01	Reactivated	376
13	2007-03-01	Reactivated	350
14	2007-06-01	Repeat	901
15	2007-01-01	New	175
16	2007-11-01	Repeat	910
17	2008-06-01	Repeat	997
18	2008-04-01	Churn	294
19	2006-10-01	Churn	120
20	2008-04-01	Repeat	855
21	2006-09-01	Repeat	931
22	2008-05-01	Churn	403
23	2006-12-01	Churn	118

03

Explore with Data Studio

