Marketing Insights for E-Commerce Company

Data Analysis SQL (BigQuery) Mini Project

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Introduction

- Datasets Sources: (https://www.kaggle.com/datasets/rishikumarrajvansh/marketing-insights-for-e-commercecompany/data)
- From the Kaggle dataset source, there are two tables that will be used in this project: online_sales and customers.
- These two tables will be entered into a database (on Google BigQuery) named ecommerce.

Business Questions

There are five business questions that will be answered in this mini project:

1. Show a list of unique products sold in September 2019.
2. Display a list of product categories whose product sales total more than 10000.
3. Calculate the average GMV (Gross Merchandise Value) for all product sales in the "Bags" category. (Note: GMV = Quantity * Avg_Price)
4. Display a list of customers whose ‘tenure_months’ is greater than the average ‘tenure_months’ of all customers.
5. Display on which (unique) dates customers from cities starting with “New” made transactions.

Answer for No.1: Show a list of unique products sold in September 2019.

Tabes used: ecommerce.online_sales, Fields Displayed: Produk_Description

```sql
-- 1. Show a list of unique products sold in September 2019.

select distinct Product_Description from ecommerce.online_sales
where Transaction_Date >= '2019-09-01' and Transaction_Date <= '2019-09-30';
```

Query results

Save results

Job information | Results | Chart | JSON | Execution details | Execution graph

Row	Product_Description
1	1 oz Hand Sanitizer
2	22 oz Android Bottle
3	22 oz YouTube Bottle Infuser
4	23 oz Wide Mouth Sport Bottle
5	25L Classic Rucksack
6	26 oz Double Wall Insulated Bot...
7	7" Dog Frisbee
8	8 pc Android Sticker Sheet

Results per page: 50 1 – 50 of 199

**Note: query run results are only partially displayed*

Answer for No.2: Display a list of product categories whose product sales total more than 10000.

Tabes used: ecommerce.online_sales, Fields Displayed: Product_Category, sum(Quantity)

```
6  -- 2. Display a list of product categories whose product sales total more than 10000.
7
8  select * from (select Product_Category, sum(Quantity) as sum_quantity from ecommerce.online_sales
9                 group by Product_Category)
10 where sum_quantity > 10000;
```

Query results

Save results

Job information | Results | Chart | JSON | Execution details | Execution graph

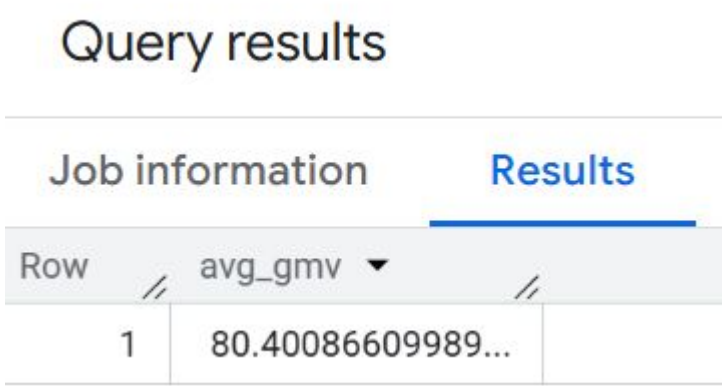
ow	Product_Category	sum_quantity
1	Lifestyle	24881
2	Drinkware	30501
3	Office	88383
4	Apparel	32438
5	Bags	15273
6	Nest-USA	21430

Results per page: 50 1 – 6 of 6

Answer for No.3: **Calculate the average GMV (Gross Merchandise Value) for all product sales in the "Bags" category.** (Note: GMV = Quantity * Avg_Price)

Tables used: ecommerce.online_sales, Fields Displayed: avg(gmv)

```
12  -- 3. Calculate the average GMV (Gross Merchandise Value) for all product sales in the "Bags" category.
    (Note: GMV = Quantity * Avg_Price)
13
14  select avg(Quantity * Avg_Price) as avg_gmv from ecommerce.online_sales
15  where Product_Category = 'Bags';
```



Answer for No.4: Display a list of customers whose ‘tenure_months’ is greater than the average ‘tenure_months’ of all customers.

Tables used: ecommerce.customers, Fields Displayed: CustomerID, Location

```
17  -- 4. Display a list of customers whose 'tenure_months' is greater than the average 'tenure_months' of all
    customers.
18
19  select CustomerID, Location from ecommerce.customers
20  where Tenure_Months > (select avg(Tenure_Months) from ecommerce.customers);
```

Query results

Save results

Job information | Results | Chart | JSON | Execution details | Execution graph

Row	CustomerID	Location
1	18144	California
2	17873	California
3	14679	California
4	18156	California
5	13564	California
6	17585	California
7	15222	California
8	16403	California

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Note: query run results are only partially displayed

Answer for No.5: Display on which (unique) dates customers from cities starting with “New” made transactions.

Tables used: ecommerce.online_sales, ecommerce.customers, Fields displayed: Transaction_Date

```sql
-- 5. Display on which (unique) dates customers from cities starting with “New” made transactions.

select distinct t1.Transaction_Date from ecommerce.online_sales t1
left join ecommerce.customers t2 on t1.CustomerID = t2.CustomerID
where substring (Location,1,3) = 'New';
```

Query results

Save results

Job information | Results | Chart | JSON | Execution details | Execution graph

Row	Transaction_Date
1	2019-01-31
2	2019-02-01
3	2019-04-12
4	2019-06-14
5	2019-07-04
6	2019-07-30
7	2019-09-07
8	2019-09-13

Results per page: 50 1 – 50 of 330

**Note: query run results are only partially displayed*

Conclusions

Based on the query results obtained, several conclusions can be drawn as follows:

1. There were a total of 199 products sold in September 2019. (file link for complete query results: Answer No.1).
2. There are six product categories with sales of more than 10,000 products, namely: Lifestyle, Drinkware, Office, Apparel, Bags, and Nest-USA.
3. The average GMV (Gross Merchandise Value) for all sales of products in the “Bags” category is around 80,4.
4. There are a total of 741 customers whose ‘tenure_months’ are greater than the average ‘tenure_months’ of all customers, where all of these customers come from five different cities, namely: California, Chicago, New Jersey, New York, and Washington D.C. (file link for complete query results: Answer No.4)
5. There were 330 different (unique) days, where customers from cities starting with “New” made transactions. (file link for complete query results: Answer No.5)

Thank You