

# Analyzing eCommerce Business Performance with SQL



**Created by:**

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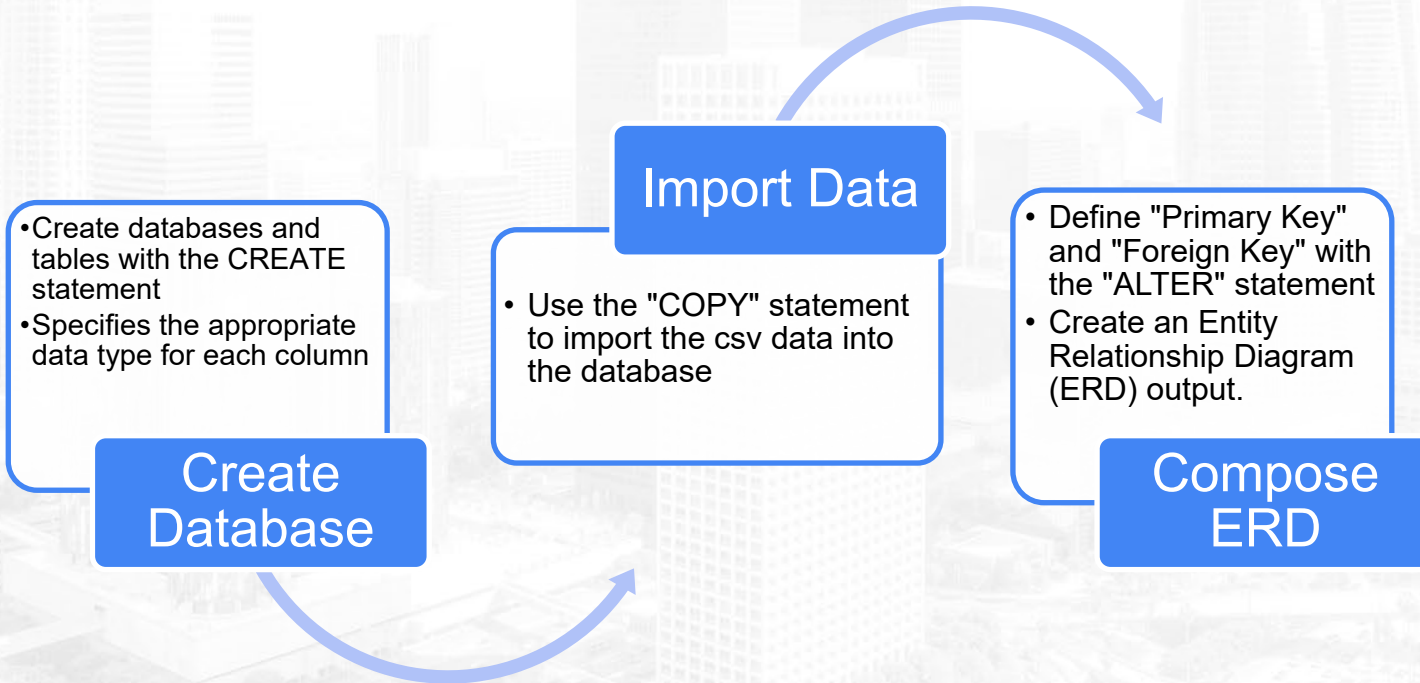
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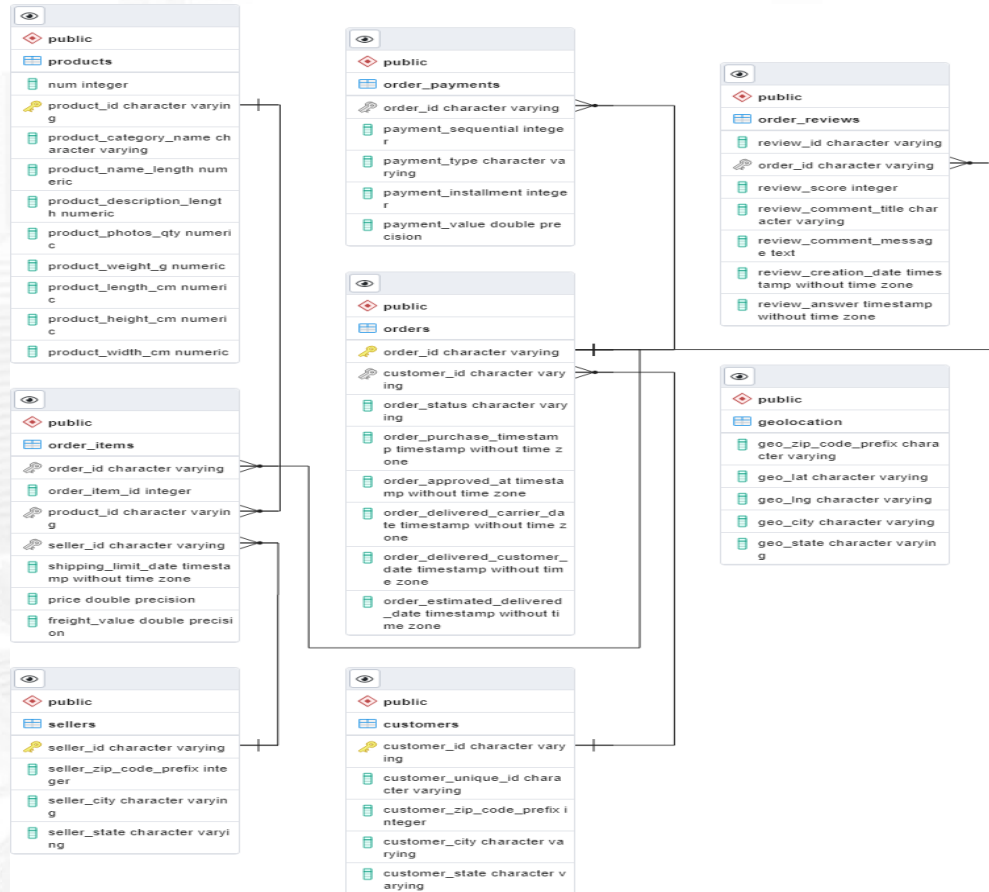
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“Works as a member of an operational team in the financial services sector and is actively studying data. I enrolled in Rakamin's Data Science Bootcamp in order to acquire the knowledge required for the modern world. I take part in interactive classes, complete various tasks, and work on final projects as a requirement for certified while being supervised by professionals from the top start-up industry. Now, I'm prepared for the upcoming opportunities.”

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“In a company measuring business performance is very important to track, monitor, and assess the success or failure of various business processes. Therefore, this paper will analyze the business performance of an eCommerce company, taking into account several business metrics, namely customer growth, product quality, and payment types.”





Not all tables have a primary key (PK), in this case a geolocation table. It has been confirmed from the dataset source that there is an error in the table so we are waiting for a decision regarding the use of the relation.

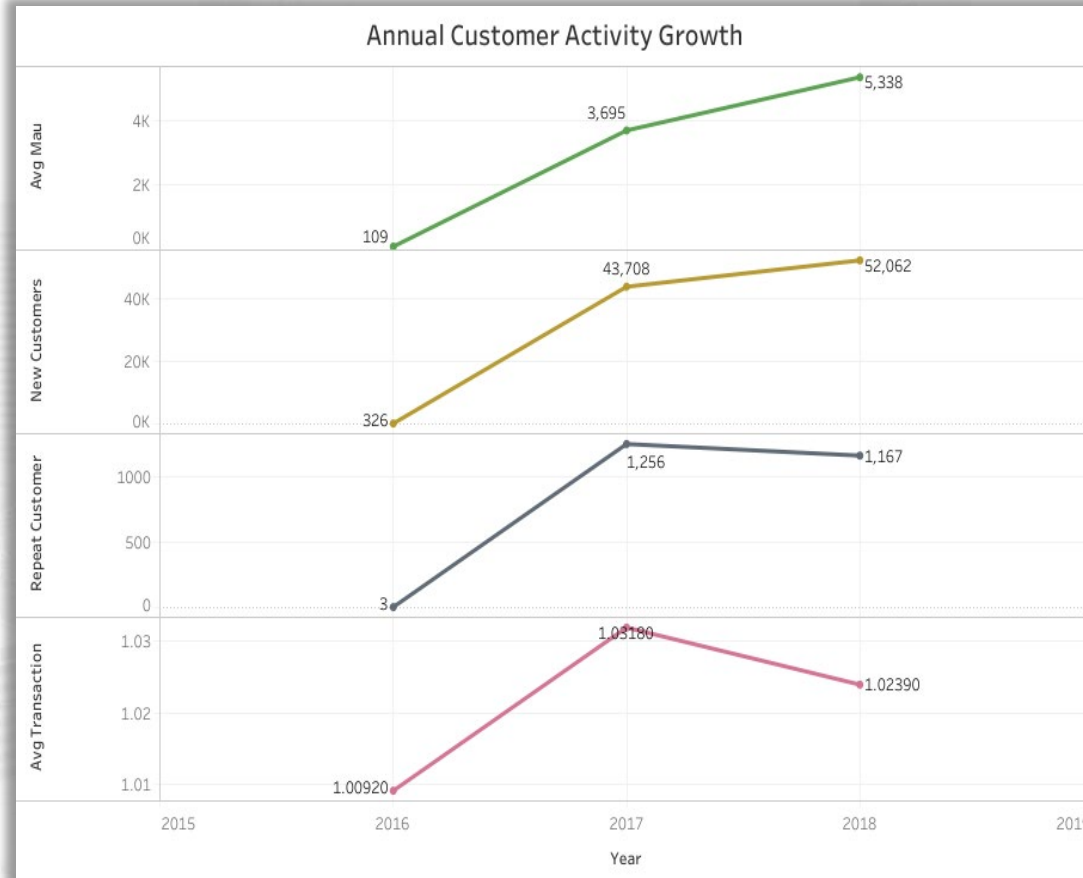
# Annual Customer Activity Growth Analysis

year	avg_mau	new_customers	repeat_customer	avg_transaction
2016	108,67	326	3	1,0092
2017	3694,83	43708	1256	1,0318
2018	5338,2	52062	1167	1,0239

## Definition:

- avg\_mau : average active users per year
- new\_customers : new user
- repeat\_customer : customers who order more than once in the same year
- avg\_transaction : the average number of transactions per customer

# Annual Customer Activity Growth Analysis



The data used for analysis began in September 2016, so in that year there were not many new customers or transaction activities from customers. In 2017 and 2018, there was an increase in the number of new customers; this is also in line with the increase in the average number of active customers per year.

Even though the number of customers has increased, when viewed from the perspective of customer transaction activity, there has been a decrease. Users who made more than one transaction (repeat order) experienced a decrease in 2018. In addition, the average transaction made by a customer has also decreased, meaning that there is a possibility that new customers are just trying but are not interested in making transactions again.

[View or Download ERD here](#)  
[The full query can be seen here](#)



# Annual Product Category Quality Analysis

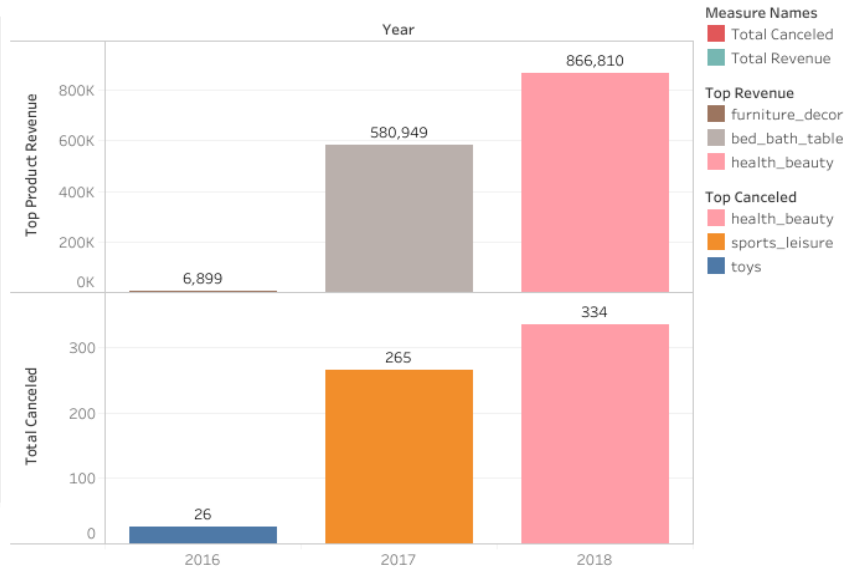
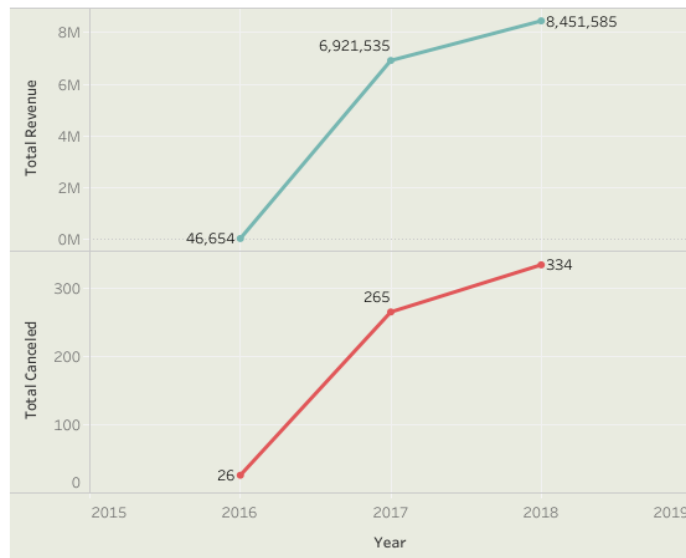
year	top_revenue	top_product_revenue	total_revenue	top_canceled	top_product_canceled	total_canceled
2016	furniture_decor	6899,35	46653,74	Toys	3	26
2017	bed bath table	580949,2	6921535,24	sports leisure	25	265
2018	health_beauty	866810,34	8451584,77	health_beauty	27	334

## Definition:

- year : year
- top\_revenue : product category with the most sales
- top\_product\_revenue : the total revenue of the product category that sells the most
- total\_revenue : total sales revenue per year
- top\_canceled : product categories with the most cancellations
- top\_product\_canceled : number of product category cancellations with the most cancellations
- total\_canceled : total number of cancellations per year

# Annual Product Category Quality Analysis

## Annual Product Category Quality



- Total revenue has increased significantly every year, but this is in line with total cancellations. This is a record, and the cause needs to be investigated.
- Every year, both the product that generates the highest revenue and the cancellation rate change. But there are similarities in 2018, where the health\_beauty category has the highest level of revenue as well as the most cancellations.



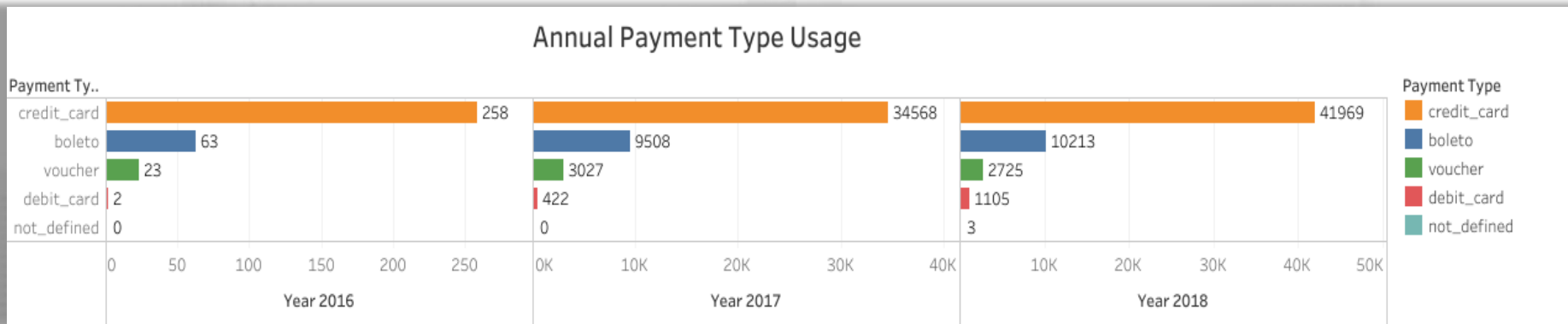
# Annual Payment Type Usage Analysis

payment_type	year_2016	year_2017	year_2018	sum_payment_type_usage
credit_card	258	34568	41969	76795
boleto	63	9508	10213	19784
voucher	23	3027	2725	5775
debit_card	2	422	1105	1529
not_defined	0	0	3	3

## Definition:

- payment\_type : the type of payment used
- year\_2016 : number of transactions using certain payment types in 2016
- year\_2017 : number of transactions using certain payment types in 2017
- year\_2018 : number of transactions using certain payment types in 2018
- sum\_payment\_type\_usage : Total transactions using a certain type of payment

# Annual Payment Type Usage Analysis



- credit\_card have been the most used payment type for three consecutive years. Apart from the convenience offered by this type of payment, it can be assumed that our customers are consumptive. so that it can be considered to be more active in promoting a strategy or campaign.
- In contrast to the point above, debit cards are the least or rarely used type of payment, even though there is an increase every year.
- Boleto is the runner-up of the several payment types above; the number of transactions consistently increases every year.
- vouchers Initially, there was an increase from 2016 to 2017, then it decreased again around 2018. Although not too significant, this decrease is an indication that there is a campaign or strategy that is not optimal.
- Based on the results of the analysis above, it is necessary to investigate further what factors make one type of payment more popular than the others so that improvements can be made.