

My-SQL Information From Customer Satisfaction Analysis

Description: This dataset contains customer satisfaction survey data on airlines

Analysis Needs:

- Descriptive analysis to understand the distribution of customer satisfaction data.
- Analyze the factors that affect customer satisfaction.
- Segment customers based on satisfaction levels.
- Recommendations to improve customer satisfaction.

Table Information :

	Field	Type	Null	Key	Default	Extra
►	NO	smallint	YES		NULL	
	Id	mediumint	NO		NULL	
	Gender	varchar(10)	NO		NULL	
	Customer_Type	varchar(20)	NO		NULL	
	Age	tinyint	NO		NULL	
	Type_of_Travel	varchar(20)	NO		NULL	
	Class	varchar(10)	NO		NULL	
	Flight_Distance	smallint	NO		NULL	
	Inflight_Wifi_Service	tinyint	YES		NULL	
	Departure_or_Arrival_Time_Convenient	tinyint	YES		NULL	
	Ease_of_Online_Booking	tinyint	YES		NULL	
	Gate_Location	tinyint	NO		NULL	
	Food_and_drink	tinyint	YES		NULL	
	Online_Boarding	tinyint	YES		NULL	
	Seat_Comfort	tinyint	NO		NULL	
	Inflight_Entertainment	tinyint	YES		NULL	
	OnBoard_Service	tinyint	YES		NULL	
	Leg_Room_Service	tinyint	YES		NULL	
	Baggage_Handling	tinyint	NO		NULL	
	Checkin_Service	tinyint	NO		NULL	
	Inflight_Service	tinyint	YES		NULL	
					NULL	

For Analysis in MySQL:

1. Descriptive analysis to understand the distribution of customer satisfaction data.

In this description analysis, we want to know the number of customers, the number by gender and the average age of customers.

Syntax SQL:

```
select count(id) as Total_Customers,
       sum(case when gender = "female" then 1 else 0 end) as Total_Female,
       sum(case when gender = "male" then 1 else 0 end) as Total_Male,
       round(avg(age),0) as Average_Age
from satisfaction;
```

Output :

	Total_Customers	Total_Female	Total_Male	Average_Age
►	25976	13172	12804	40

2. Analyze the factors that affect customer satisfaction.

Then look for the satisfaction rating value of each category and its average.

Syntax SQL:

```
• select "Inflight_Wifi_Service" as Category,
       Inflight_Wifi_Service as Rating,
       count(*) as Total_Rating
from satisfaction
where Inflight_Wifi_Service between 1 and 5
group by Inflight_Wifi_Service

union all

select "Departure_or_Arrival_Time_Convenient" as Category,
       Departure_or_Arrival_Time_Convenient as Rating,
       count(*) as Total_Rating
from satisfaction
where Departure_or_Arrival_Time_Convenient between 1 and 5
group by Departure_or_Arrival_Time_Convenient

union all

select "Ease_of_Online_Booking" as Category,
       Ease_of_Online_Booking as Rating,
       count(*) as Total_Rating
from satisfaction
where Ease_of_Online_Booking between 1 and 5
group by Ease_of_Online_Booking
```

Output:

	Category	Rating	Total_Rating
▶	Baggage_Handling	1	1791
	Baggage_Handling	2	2841
	Baggage_Handling	3	5219
	Baggage_Handling	4	9378
	Baggage_Handling	5	6747
	Checkin_Service	1	3218
	Checkin_Service	2	3209
	Checkin_Service	3	7007
	Checkin_Service	4	7278
	Checkin_Service	5	5264
	Cleanliness	1	3411
	Cleanliness	2	3981
	Cleanliness	3	6065
	Cleanliness	4	6790
	Cleanliness	5	5727
	Departure_or_Arrival_Service	1	3911
	Departure_or_Arrival_Service	2	4343
	Departure_or_Arrival_Service	3	4412
	Departure_or_Arrival_Service	4	6334
	Departure_or_Arrival_Service	5	5595
	Ease_of_Online_Booking	1	4361

AVERAGE Category:

```
union all

select 'Checkin_Service' as Category,
       round(avg(Checkin_Service ),0) as AVG_Rating
from   satisfaction
where  Checkin_Service between 1 and 5

union all

select "Inflight_Service" as Category,
       round(avg(Inflight_Service ),0) as AVG_Rating
from   satisfaction
where  Inflight_Service between 1 and 5

union all

select 'Cleanliness' as Category,
       round(avg(Cleanliness),0) as AVG_Rating
from   satisfaction
where  Cleanliness between 1 and 5
order by Category;
```

Output:

	Category	AVG_Rating
►	Baggage_Handling	4
	Checkin_Service	3
	Cleanliness	3
	Departure_or_Arrival_Time_Convenient	3
	Ease_of_Online_Booking	3
	Food_and_Drink	3
	Gate_Location	3
	Inflight_Entertainment	3
	Inflight_Service	4
	Inflight_Wifi_Service	3
	Leg_Room_Service	3
	Onboard_Service	3
	Online_Boarding	3
	Seat_Comfort	3

3. Segment customers based on satisfaction levels

Syntax SQL:

```
select count(id) as Total_Customers,
       sum(case when gender = "female" then 1 else 0 end) as Total_Female,
       sum(case when gender = "male" then 1 else 0 end) as Total_Male,
       round(avg(age),0) as Average_Age,
       sum(case when customer_type = "loyal customer" then 1 else 0 end) as Loyal,
       sum(case when customer_type = "disloyal customer" then 1 else 0 end) as Disloyal,
       sum(case when type_of_travel = "business travel" then 1 else 0 end) as Buss_Travel,
       sum(case when type_of_travel = "personal travel" then 1 else 0 end) as pers_Travel,
       sum(case when class = "business" then 1 else 0 end) as Business,
       sum(case when class = 'eco' then 1 else 0 end) as Eco,
       sum(case when class = 'eco plus' then 1 else 0 end) as Eco_Plus,
       sum(case when satisfaction = 'satisfied' then 1 else 0 end) as Satisfied,
       sum(case when satisfaction = 'neutral or dissatisfied' then 1 else 0 end) as Neutral_or_Disssatisfied
from satisfaction;
```

Output:

	Total_Customers	Total_Female	Total_Male	Average_Age	Loyal	Disloyal	Buss_Travel	pers_Travel	Business	Eco	Eco_Plus	Satisfied	Neutral_or_Disssatisfied
►	25976	13172	12804	40	21177	4799	18038	7938	12495	11564	1917	11403	14573

4. Recommendations to improve customer satisfaction.

The results of the data above can be concluded that the level of application provided is still lacking, and it can be seen that there are only a few who have a good rating value or reach a score of 4. This means that there needs to be a periodic evaluation to overcome this.