Capstone Project

Warby Parker Funnel

By

Ignacio Real

Warby Parker - Funnel

QUESTION 1 – WHAT COLUMNS DOES THE TABLE HAVE?

In the table named 'SURVEY' there are three columns

- Question – contains the questions asked on the survey
- User_id – id of users who have taken the survey
- Response – answers to the questions of the survey
- Example of Table below:

Question	User_ID	Response

Query:

```
SELECT *
 FROM survey
 LIMIT 10;
```

Warby Parker - Funnel

QUESTION 2 – WHAT IS THE NUMBER OF RESPONSES FOR EACH QUESTION?

- In order to see the progression of the quiz, we need to count the distinct amount of users who answered each question.
- This will also allow us to see where users drop off
- Example of table below:

question	COUNT (DISTINCT(user_id))
1. What are you looking for?	500
2. What's your fit?	475
3. Which shapes do you like?	380
4. Which colors do you like?	361
5. When was your last eye exam?	270

Query:

```
SELECT question, COUNT
(DISTINCT(user_id))
 FROM survey
 GROUP BY 1;
```

Warby Parker - Funnel

QUESTION 3 – Which questions have the lowest completion rate?

- Using excel I divided the count of users by the number of those who answered the previous questions to determine the completion rate of each question
- Question 5 had the lowest completion rate, low results could be attributed to: Users not remembering when they took their last exam, Users could be shopping for Rx glasses for the first time and may have never taken an eye exam, or Users do not need Rx glasses and may be shopping for Sunglasses
- Question 3 has the second lowest completion rate. This could be due to users not knowing the name of the variety of shapes, or not having a preference of shape
- Example of table below:

Question	COUNT (DISTINCT(user_id))	Completion Rate
1. What are you looking for?	500	
2. What's your fit?	475	95%
3. Which shapes do you like?	380	80%
4. Which colors do you like?	361	95%
5. When was your last eye exam?	270	75%

Query:

```
SELECT question, COUNT
(DISTINCT(user_id))
 FROM survey
 GROUP BY 1;
```

Warby Parker - Funnel

QUESTION 4 – Get to know the 3 tables

- Examples of the three tables quiz, home_try_on, and purchase are copied below, In their respective order.

user_id	style	fit	shape	color
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	Women's Styles	Medium	Rectangular	Tortoise

user_id	number_of_pairs	address
d8addd87-3217-4429-9a01-d56d68111da7	5 pairs	145 New York 9a

user_id	product_id	style	model_name	color	price
00a9dd17-36c8-430c-9d76-df49d4197dcf	8	Women's Styles	Lucy	Jet Black	150

Query:

```
SELECT *
FROM quiz
LIMIT 5;
SELECT *
FROM home_try_on
LIMIT 5;
SELECT *
FROM purchase
LIMIT 5;
```

Warby Parker - Funnel

QUESTION 5 – Create new table using joining Users from quiz, home try on and purchase

- In this exercise we created a new table to joining quiz, home try on, and purchase table by user_id
- Following the prior query, we created a new query from the prior table called ”Funnel” to re-lable results that appeared as 1 & 0 as “True” and ”False”
- Example of table below:

user_id	is_home_try_on	number_of_pairs	is_purchase
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	TRUE	3 pairs	FALSE

Query:

```
 WITH FUNNEL AS (
SELECT DISTINCT q.user_id,h.user_id
is not null as
'is_home_try_on',h.number_of_pairs,p
.user_id is not null as
'is_purchase'
 FROM quiz as 'q'
 LEFT JOIN home_try_on as 'h' ON
q.user_id=h.user_id
 LEFT JOIN purchase as 'p'
 on p.user_id = h.user_id)
 SELECT user_id, (CASE WHEN
is_home_try_on = 1 THEN 'TRUE' ELSE
'FALSE' END) as is_home_try_on,
(CASE WHEN number_of_pairs IS NULL
THEN 'NULL' ELSE number_of_pairs
END) AS number_of_pairs, (CASE WHEN
is_purchase =1 THEN 'TRUE' ELSE
'FALSE' END ) as is_purchase
 FROM FUNNEL
 LIMIT 10
```

Warby Parker - Funnel

QUESTION 6 – Conversion rate from users who took the quiz, who then tried on a pair, and purchased

- In order to see the conversion rate from users who tried on a pair of glasses at home, who then purchased, a table was created from the funnel query counting the rows that were not null from the “home try on” and the ”purchase” table, followed by a query to convert integers to float in order to calculate conversion rates
- Findings were: there were 1,000 users who took the quiz and 75% of the quiz takers received glasses to try on at home
- Out of the 75% of users who tried on glasses, 66% went on to make a purchase
- The purchase rate is above avg. and indicates that trying on a pair of Warby Parker glasses at home is a effective in leading to purchasing a pair
- Example of table below:

quiz_takers	home_try_on	purchased	browse_to_try_on	try_on_to_checkout
1000	750	495	0.75	0.66

Query:

```
WITH FUNNEL AS (
SELECT DISTINCT q.user_id,h.user_id
is not null as
'is_home_try_on',h.number_of_pairs,p
.user_id is not null as
'is_purchase'
 FROM quiz as 'q'
 LEFT JOIN home_try_on as 'h' ON
q.user_id=h.user_id
 LEFT JOIN purchase as 'p'
 on p.user_id = h.user_id)
 SELECT COUNT (*) AS 'quiz_takers',
SUM(is_home_try_on) as
'home_try_on',SUM(is_purchase) as
'purchased',
 1.0 * SUM(is_home_try_on)/COUNT
(user_id) as 'browse_to_try_on',
1.0*SUM(is_purchase)/SUM(is_home_try
_on) as 'try_on_to_checkout'
 FROM FUNNEL
 ;
```

Warby Parker - Funnel

QUESTION 6 Cont. – Conversion rate of purchase between users who received 3 pairs or 5 pairs

- Warby launched it's A/B test of sending users 3 pairs or 5 pairs of glasses to try on at home
- A table was created joining the "home_try_on" table with the "purchase" table counting the rows of users who received 3 pairs and 5 pairs
- A second count was performed of users who went on to purchase after they received 3 or 5 pairs of glasses
- On an excel sheet the conversion was calculated
- Findings are: 79% of those who received 5 pairs went on to purchase, while only 53% of those who received 3 pairs purchased. This indicates users would rather try on more than just 3 pairs before purchasing, and having the option to do so will most likely lead to more purchases
- Example of table below:

tried on 3 pairs	tried on 5 pairs	tried on 3 and purchased	tried on 5 and purchased
379	371	201	294
Conversion rate		53%	79%

Query:

```
WITH FUNNEL AS (
SELECT DISTINCT q.user_id,h.user_id
is not null as
'is_home_try_on',h.number_of_pairs,p
.user_id is not null as
'is_purchase'
 FROM quiz as 'q'
 LEFT JOIN home_try_on as 'h' ON
q.user_id=h.user_id
 LEFT JOIN purchase as 'p'
 on p.user_id = h.user_id)
SELECT SUM (CASE WHEN
number_of_pairs ='3 pairs' THEN
is_home_try_on ELSE null END) AS
'tried on 3 pairs', SUM ( CASE WHEN
number_of_pairs = '5 pairs' THEN
is_home_try_on ELSE null END) AS
'tried on 5 pairs', SUM (CASE WHEN
number_of_pairs = '3 pairs' THEN
is_purchase ELSE null END) AS 'tried
on 3 and purchased', SUM ( CASE WHEN
number_of_pairs = '5 pairs' THEN
is_purchase ELSE null END) AS 'tried
on 5 and purchased'
 FROM FUNNEL
 ;
```

Warby Parker - Funnel

QUESTION 6 Cont. – Which style was purchased most, Male and Female?

- Using the Funnel query, a table was created summing the amount of purchases by style
- Women styles were purchased more than Men styles but not by much, it is safe to assume that Warby Parker appeals to Men as much as Women
- Example of table below:

Purchased Women	Purchased Men
252	243

Query:

```
WITH FUNNEL AS (
SELECT DISTINCT
q.user_id,p.style,h.user_id is not
null as
'is_home_try_on',h.number_of_pairs,p
.user_id is not null as
'is_purchase'
 FROM quiz as 'q'
 LEFT JOIN home_try_on as 'h' ON
q.user_id=h.user_id
 LEFT JOIN purchase as 'p'
 on p.user_id = h.user_id)
SELECT SUM (CASE WHEN style like
'Women%' then is_purchase ELSE null
end) as 'Purchased Women', SUM (CASE
WHEN style like 'Men%' then
is_purchase ELSE null END)
 AS 'Purchased Men'
 FROM FUNNEL
 ;
```