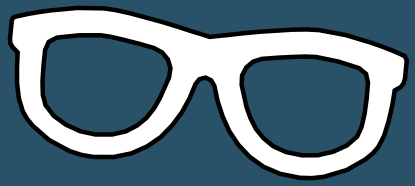
WARBY PARKER



Usage Funnels

Analyze Data with SQL

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Goals of project

1. Analyze different Warby Parker's marketing funnels in order to calculate conversion rates.
2. Calculate drop off rate on each rent step of marketing funnels.
3. Calculate the difference in purchase rates between customers who had 3 numbers of pairs tried with ones who had 5.
4. The most common results of the style according to quiz and type of purchase made.

1. Drop off rate in start-up’s survey.

1.1 Quiz table

To help users find their perfect frame, Warby Parker has a Style Quiz. Users will “give up” at different points in the survey. Let’s analyze how many users move from Question 1 to Question 2, etc. We have created a quiz funnel using the GROUP BY command. The ‘**Compare conversion**’ column has the percentage of users who answer each question.
No. 3 and 5 question(s) of the quiz have a lower completion rates. It seems to me that these questions may be too hard to answer immediately.
We need to move question 4 to be on the third place (so more people will complete this question before a drop off) and work on simplicity of the last two questions. In ‘**Overall conversion rates’** column we can see that only 54% completed the survey.

Quiz question	Number of answers	Compare conversion	Overall conversion rates
1. What are you looking for?	500	1	1
2. What's your fit?	475	0.95	0.95
3. Which shapes do you like?	380	0.8	0.76
4. Which colors do you like?	361	0.95	0.722
5. When was your last eye exam?	270	0.75	0.54

2. Warby Parker’s marketing funnels

2.1 Funnel

Home Try-On Funnel:
Take the Style Quiz → Home Try-On → Purchase the Perfect Pair of Glasses
(quiz, home_try_on, purchase tables accordingly)

Query Results

user_id	is_home_try_on	number_of_pairs	is_purchase
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	1	3 pairs	0
291f1cca-e507-48be-b063-002b14906468	1	3 pairs	1
75122300-0736-4087-b6d8-c0c5373a1a04	0	Ø	0
75bc6ebd-40cd-4e1d-a301-27ddd93b12e2	1	5 pairs	0
ce965c4d-7a2b-4db6-9847-601747fa7812	1	3 pairs	1
28867d12-27a6-4e6a-a5fb-8bb5440117ae	1	5 pairs	1
5a7a7e13-fbcf-46e4-9093-79799649d6c5	0	Ø	0
0143cb8b-bb81-4916-9750-ce956c9f9bd9	0	Ø	0
a4ccc1b3-cbb6-449c-b7a5-03af42c97433	1	5 pairs	0
b1dded76-cd60-4222-82cb-f6d464104298	1	3 pairs	0

```
#I have used a LEFT JOIN to combine the
three tables, starting with the top of the
funnel (quiz) and ending with the bottom of
the funnel (purchase).
SELECT DISTINCT quiz.user_id,
home_try_on.user_id IS NOT NULL AS
'is_home_try_on',
home_try_on.number_of_pairs,
purchase.user_id IS NOT NULL AS
'is_purchase'
FROM quiz
LEFT JOIN home_try_on
ON quiz.user_id = home_try_on.user_id
LEFT JOIN purchase
ON purchase.user_id = quiz.user_id
LIMIT 10;
```

2.2 Conversion rates

We can compare conversion:
quiz→home_try_on which is 75%
and home_try_on→purchase is 66%
It is good conversion rate, three quatres people are interested to try on glasses, but 44% still do not purchase after trying on.
Let's compare how many pairs of glasses did they receive – 3 or 5?

Query Results		
num_quized	num_tried	num_purchase
1000	750	495
100%	75%	66%

```
#WITH clause to use new funnel table
WITH funnels AS (SELECT DISTINCT
quiz.user_id,
home_try_on.user_id IS NOT NULL AS
'is_home_try_on',
home_try_on.number_of_pairs,
purchase.user_id IS NOT NULL AS
'is_purchase'
FROM quiz
LEFT JOIN home_try_on
ON quiz.user_id = home_try_on.user_id
LEFT JOIN purchase
ON purchase.user_id = quiz.user_id)
SELECT COUNT(*) AS 'num_quized',
SUM(is_home_try_on) AS 'num_tried',
SUM(is_purchase) AS 'num_purchase'
FROM funnels;
```

3. A/B test results:

3.1 A/B test

During the Home Try-On stage, we will be conducting an A/B Test:
50% of the users will get 3 pairs to try on
50% of the users will get 5 pairs to try on

Query Results		
total tried	tried_3_pairs	tried_5_pairs
750	379	371
100%	50.5%	49.5%

```
# 1 if they tried at home and 0 if not
WITH funnels AS (SELECT DISTINCT
quiz.user_id,
home_try_on.user_id IS NOT NULL AS
'is_home_try_on',
home_try_on.number_of_pairs,
purchase.user_id IS NOT NULL AS
'is_purchase'
FROM quiz
LEFT JOIN home_try_on
ON quiz.user_id = home_try_on.user_id
LEFT JOIN purchase
ON purchase.user_id = quiz.user_id)
SELECT SUM(is_home_try_on) AS 'total
tried',
SUM(CASE
WHEN number_of_pairs = '3 pairs'
THEN is_home_try_on
END) AS 'tried_3_pairs',
SUM(CASE
WHEN number_of_pairs = '5 pairs'
THEN is_home_try_on
END) AS 'tried_5_pairs'
FROM funnels;
```

3.2 A/B test conversion rates

66% of customers, who received 3 or 5 pairs of glasses have made a purchase.
Almost 60% of these customers have received 5 pairs to try at home.
It can mean that the more styles customer tries the more likely they will make a purchase.

Purchase rate for 3 pairs: 53% (201/379)
Purchase rate for 5 pairs: 79% (294/371)
It is recommended to encourage customers to try 5 pairs of glasses at home.

Query Results		
num_purchases	tried_3_pairs	tried_5_pairs
495	201	294
100%	40.6%	59.4%

```
WITH funnels AS (SELECT DISTINCT
quiz.user_id,
home_try_on.user_id IS NOT NULL AS
'is_home_try_on',
home_try_on.number_of_pairs,
purchase.user_id IS NOT NULL AS
'is_purchase'
FROM quiz
LEFT JOIN home_try_on
ON quiz.user_id = home_try_on.user_id
LEFT JOIN purchase
ON purchase.user_id = quiz.user_id)
SELECT SUM(is_purchase) AS
'num_purchases',
SUM(CASE
WHEN number_of_pairs = '3 pairs'
THEN is_purchase
END) AS 'tried_3_pairs',
SUM(CASE
WHEN number_of_pairs = '5 pairs'
THEN is_purchase
END) AS 'tried_5_pairs'
FROM funnels;
```

4. The most common style

4.1 Common style of glasses

- The most common results of the style quiz.

According to the quiz, only 9.9% of customers are not sure about style.
The distribution between Women's and Men's Styles is almost equal.

- The most common types of purchase made.

In the purchase table the distribution between Women's and Men's Styles are roughly 50%-50%.
It means, that there is no favored style, or that male and female customers are represented equally in this online shop.
We can make two conclusions:

- Start-up should focuse on both styles equally.
- They can trust their questionary, the answers are similar to the real purchase.

QUIZED	
style	**COUNT**
Women's Styles	469
Men's Styles	432
I'm not sure. Let's skip it.	99
PURCHASED	
style	**COUNT**
Women's Styles	252
Men's Styles	243