Warby Parker's Marketing Funnels Project

Analyze Data with SQL

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SQL skills used in this project

RDBMS: MySQL

Used functions: COUNT, AS, GROUP BY, DISTINCT, IS NOT NULL, LEFT JOIN, ORDER BY, CTE

Creating marketing questions funnel

Conducting A/B test

Company description

Warby Parker is a transformative lifestyle brand with a lofty objective: to offer designer eyewear at a revolutionary price while leading the way for socially conscious businesses. Founded in 2010 and named after two characters in an early Jack Kerouac journal, Warby Parker believes in creative thinking, smart design, and doing good in the world — for every pair of eyeglasses and sunglasses sold, a pair is distributed to someone in need.

Project objective

In this project, you will analyze different Warby Parker’s marketing funnels in order to calculate conversion rates.

Given funnels and tables

Quiz Funnel:

- survey

Home Try-On Funnel:

- quiz
- home_try_on
- purchase

Database schema

home_try_on	purchase	survey	quiz
user_id TEXT number_of_pairs TEXT address TEXT	user_id TEXT product_id INTEGER style TEXT model_name TEXT color TEXT price INTEGER	question TEXT user_id TEXT response TEXT	user_id TEXT style TEXT fit TEXT shape TEXT color TEXT

Quiz Funnel

Quiz Funnel - style quiz questions - stored in the survey table

- “What are you looking for?”
- “What’s your fit?”
- “Which shapes do you like?”
- “Which colors do you like?”
- “When was your last eye exam?”

Quiz Funnel → How many users move from Question 1 to Question 2, etc?

```
SELECT question, COUNT(user_id) AS answers_number
 FROM survey
 GROUP BY question
```

question	answers_number
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

Excel - The percentage of users who answer each question

Which question(s) of the quiz have a lower completion rates?

The closer to the end of the survey, the fewer questions are answered

What do you think is the reason?

Possible reasons: people are bored with the survey, they are distracted, they do not find the answer to the question quickly

question	answers_number	answers_percentage
1. What are you looking for?	500	100%
2. What's your fit?	475	95%
3. Which shapes do you like?	380	76%
4. Which colors do you like?	361	72%
5. When was your last eye exam?	270	54%

Home Try-On Funnel:

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

Which users are more likely to make a purchase?

Funnel

```
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 q
LEFT JOIN home_try_on h
ON q.user_id = h.user_id
LEFT JOIN purchase p
ON p.user_id = q.user_id
LIMIT 10;
```

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

Funnel - comparing number of conversion

```
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 q

LEFT JOIN home_try_on h

ON q.user_id = h.user_id

LEFT JOIN purchase p

ON p.user_id = q.user_id)

SELECT COUNT(*) AS num_overall_conversion,
SUM(is_home_try_on) AS num_home_try_on, SUM(is_purchase) AS
num_purchase

FROM funnel
```

num_overall_conversion	num_home_try_on	num_purchase
1000	750	495

Funnel - comparing percentage of conversion

```
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 q
LEFT JOIN home_try_on h
ON q.user_id = h.user_id
LEFT JOIN purchase p
ON p.user_id = q.user_id)
SELECT   1.0 * SUM(is_home_try_on) / COUNT(user_id) AS 'try_on_conv',
  1.0 * SUM(is_purchase) / SUM(is_home_try_on) AS 'try_on_to_purchase_conv'
FROM funnel
```

try_on_conv	try_on_to_purchase_conv
0.75	0.66

Funnel - A/B Test - number of pairs to try on and percentage of purchases

```
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 q
LEFT JOIN home_try_on h
ON q.user_id = h.user_id
LEFT JOIN purchase p
ON p.user_id = q.user_id)
SELECT number_of_pairs, ROUND(1.0 * SUM(is_purchase) / SUM(is_home_try_on), 2) AS purchase_conv
FROM funnel
WHERE number_of_pairs IS NOT NULL
GROUP BY number_of_pairs
```

number_of_pairs	purchase_conv
3 pairs	0.53
5 pairs	0.79

Most common style picked in quiz

```
SELECT style, COUNT (style) AS style_frequency
FROM quiz
GROUP BY style
ORDER BY style_frequency DESC
LIMIT 1
```

style	style_frequency
Women's Styles	469

Most common styles that are purchased

```
SELECT style, COUNT(user_id)
FROM purchase
GROUP BY style
ORDER BY COUNT(user_id) DESC
```

style	COUNT(user_id)
Women's Styles	252
Men's Styles	243