codecademy

Usage Funnels With Warby Parker

Learn SQL from Scratch

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Get Familiar with Warby Parker

Warby Parker is primarily an online retailer of prescription glasses and sunglasses. While they have close to 100 retail locations, most of their business is online. Customers take a quiz that helps them find frames that fit their personal style, and then they select their favorites for an at home try on for free.

2. Style Quiz Funnel

2.1 Style Quiz Funnel

When a customer goes to the Warby Parker website, they are directed to take a style quiz

Question	Response Count	% of Users who answer each question
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%

```
-- Counting the unique responses per question

select question, count(distinct user_id)
from survey
group by question;
```

2.2 Style Quiz Funnel Analysis

Nearly half of the users do not fully complete the quiz

Why?

- Is the quiz too long?
- Do the users not think the questions are relevant?
- Did they leave the quiz to go browse styles on their own?

3. A/B Testing with Home Try-On Funnel

3.1 What is A/B Testing?

A/B Testing is a randomized experiment with two variables. Warby Parker decided to test if sending 3 pairs, or 5 pairs of glasses was more likely to lead to a purchase

3.2 A/B Test

There were three separate tables that stored the data needed to run this test. After joining the tables on user id, I rearranged the data in a way that makes it easier to analyze for the A/B test

Query Results

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

```
-- created a table that gave the total count of home
try ons and purchases by the number of pairs --


with test as (select distinct q.user_id,
             h.user_id is not null as
'is_home_try_on',
             h.number_of_pairs as 'num_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 q.user_id = p.user_id)
select
t.num_pairs,
sum (t.is_home_try_on) as 'Total_Home_Try_On',
sum (t.is_purchase) as 'Total_Purchase'
from test as t
where t.num_pairs is not null
group by t.num_pairs;
```

3.3 A/B Test

After rearranging the data, I took the sum of home try ons, and purchases based upon if the user had 3 pairs or 5 pairs at their home try on.

Query Results

num_pairs	Total_Home_Try_On	Total_Purchase	Try_on_to_Purchase_percentag
3 pairs	379	201	0.530343007915567
5 pairs	371	294	0.792452830188679

```
-- using the last query, find the % of purchases when
grouped by num pairs -

with test as (select distinct q.user_id,
             h.user_id is not null as
'is_home_try_on',
             h.number_of_pairs as 'num_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 q.user_id = p.user_id)
select
             t.num_pairs,
             sum (t.is_home_try_on) as
'Total_Home_Try_On',
             sum (t.is_purchase) as 'Total_Purchase',
  1.0 * sum(t.is_purchase)/ sum(t.is_home_try_on) as
'Try_on_to_Purchase_percentage'
             from test as t
             where t.num_pairs is not null
             group by t.num_pairs;
```

3.4 A/B Test Results

Users that received 5 pairs in their home try on purchased at a rate of 79% where users who received 3 pairs only purchased at a rate of 53%

There is a significant difference in purchase behavior by the users when they are sent 5 pairs versus 3 pairs