codecademy

Learn SQL from Scratch

Samuel Omariba

24th July, 2018

Table of Contents

1. Quiz Funnel

Quiz Funnel

In this query I selected the first 10 rows of all the columns in the table survey

question	user_id	response
1. What are you looking for?	005e7f99-d48c-4fce-b605-10506c85aaf7	Women's Styles
2. What's your fit?	005e7f99-d48c-4fce-b605-10506c85aaf7	Medium
3. Which shapes do you like?	00a556ed-f13e-4c67-8704-27e3573684cd	Round
4. Which colors do you like?	00a556ed-f13e-4c67-8704-27e3573684cd	Two-Tone
1. What are you looking for?	00a556ed-f13e-4c67-8704-27e3573684cd	I'm not sure. Let's skip it.
2. What's your fit?	00a556ed-f13e-4c67-8704-27e3573684cd	Narrow
5. When was your last eye exam?	00a556ed-f13e-4c67-8704-27e3573684cd	<1 Year
3. Which shapes do you like?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Square
5. When was your last eye exam?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	<1 Year
2. What's your fit?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Medium

```
-- Query used

SELECT *
FROM survey
LIMIT 10;
```

2.Compare Funnels from A/B tests

In this query, I counted the number of users who moved from question 1 to question 2, question 2 to question 3, question 3 to question 4 and question 4 to question 5. The results are as shown 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 used

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

3. Percentage completion

In this stage, I looked for the percentage of users that completed each of the questions from the previous one. The results are as shown below.

Question Number	Number completing this step	Percent completing this step
1	500	100%
2	475	95%
3	380	80%
4	361	95%
5	270	75%

Question 5 and 3 have lower completion rates.

This could be due to the intrusive nature of the questions.

4. Home Try-on Funnel

In this step, I analyzed the first five rows of the table quiz. The results are as shown below

user_id	style	fit	shape	color
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	Women's Styles	Medium	Rectangular	Tortoise
291f1cca-e507-48be-b063-002b14906468	Women's Styles	Narrow	Round	Black
75122300-0736-4087-b6d8-c0c5373a1a04	Women's Styles	Wide	Rectangular	Two-Tone
75bc6ebd-40cd-4e1d-a301-27ddd93b12e2	Women's Styles	Narrow	Square	Two-Tone
ce965c4d-7a2b-4db6-9847-601747fa7812	Women's Styles	Wide	Rectangular	Black

```
-- Query used

SELECT *
FROM quiz
LIMIT 5;
```

In this step, I analyzed the first five rows of the table purchase. The results are as shown below

user_id	product_id	style	model_name	color	price
00a9dd17-36c8-430c-9d76-df49d4197dcf	8	Women's Styles	Lucy	Jet Black	150
00e15fe0-c86f-4818-9c63-3422211baa97	7	Women's Styles	Lucy	Elderflower Crystal	150
017506f7-aba1-4b9d-8b7b-f4426e71b8ca	4	Men's Styles	Dawes	Jet Black	150
0176bfb3-9c51-4b1c-b593-87edab3c54cb	10	Women's Styles	Eugene Narrow	Rosewood Tortoise	95
01fdf106-f73c-4d3f-a036-2f3e2ab1ce06	8	Women's Styles	Lucy	Jet Black	150

```
-- Query used

SELECT *
FROM purchase
LIMIT 5;
```

In this step, I analyzed the first five rows of the home_try_on. The results are as shown below

user_id	number_of_pairs	address
d8addd87-3217-4429-9a01-d56d68111da7	5 pairs	145 New York 9a
f52b07c8-abe4-4f4a-9d39-ba9fc9a184cc	5 pairs	383 Madison Ave
8ba0d2d5-1a31-403e-9fa5-79540f8477f9	5 pairs	287 Pell St
4e71850e-8bbf-4e6b-accc-49a7bb46c586	3 pairs	347 Madison Square N
3bc8f97f-2336-4dab-bd86-e391609dab97	5 pairs	182 Cornelia St

```
-- Query used

SELECT *
FROM home_try_on
LIMIT 5;
```

5. Creating new table

In this step, I created a new table with the columns user_id, is_home_try_on, number_of_pairs and is_purchase.

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		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		0
0143cb8b-bb81-4916-9750-ce956c9f9bd9	0		0
a4ccc1b3-cbb6-449c-b7a5-03af42c97433	1	5 pairs	0
b1dded76-cd60-4222-82cb-f6d464104298	1	3 pairs	0

```
-- Query used

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

6.Conversion comparison

In this step, I compared the conversion from quiz to home_try_on and home_try_on to purchase. The results are as shown below.

num_quiz	num_home_try_on	num_purchase	quiz_to_home_try_on	home_try_on_to_purchase
1000	750	495	0.75	0.495

```
-- Query used

WITH funnels 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 as 'h'
   ON q.user_id = h.user_id
LEFT JOIN purchase as 'p'
   ON p.user_id = q.user_id)
SELECT COUNT (*) AS 'num_quiz',
             SUM (is_home_try_on) as 'num_home_try_on',
  SUM (is_purchase) as 'num_purchase',
  1.0 * SUM (is_home_try_on)/COUNT (user_id) as 'quiz_to_home_try_on',
  1.0 * SUM (is_purchase)/ COUNT (user_id) as 'home_try_on_to_purchase'
  from funnels;
```

The results show that 75% of those who complete the quiz move to the home-try_on and about 50% of those who do the home try on will purchase.