

Warby Parker's Marketing Funnels

Learn SQL From Scratch



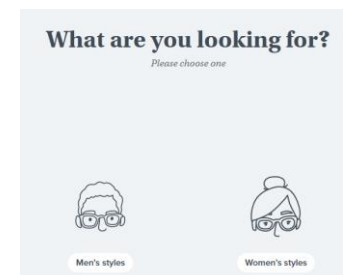
Survey table (Question #1)

- To help users find their perfect frame, Warby Parker has a Style Quiz. The users' responses are stored in a table called survey.

```
select * from survey  
limit 10;
```

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

- The columns in the survey table are “question”, “user_id”, and “response”



Number of Users Answering Each Question in the Survey (Question #2)

- As can be seen, users will “give up” at different points in the survey. In creating a quiz funnel from the survey table, we can analyze how many users move from Question 1 to Question 2.

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

question	num_users
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

- The table shows that 500 users answered Question 1. Of those users, 475 users answered Question #2, 380 answered Question #3, 361 answered Question #4, and 270 answered Question #5.

Percentage of Users Answering Each Question in the Survey (Question #3)

- From the quiz funnel shown in the previous slide, we can calculate the percentage of users who answered each question.

Question #	Question	Number of Users	Percent
1	1. What are you looking for?	500	100%
2	2. What's your fit?	475	95%
3	3. Which shapes do you like?	380	80%
4	4. Which colors do you like?	361	95%
5	5. When was your last eye exam?	270	75%

- In analyzing the completion rates from the table above, we see that Question 5 had the lowest completion rate and Question 3 had the second lowest completion rate. Question 5 may have had the lowest completion rate because the question is no longer relevant to understanding the style of glasses that the customer wants to purchase.
 - *Note: If user does not know when his/her last exam was, there is an option to select “Not Sure. Let’s Skip It” so the completion rate can’t necessarily be low because the user doesn’t remember his last exam.*

Warby's Purchase Funnel (Question #4)

- The data used for Warby's Purchase funnel is distributed across 3 tables: the quiz, home_try_on, and purchase tables

Quiz	question	num_users
	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

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-a301-27dd93b12e2	Women's Styles	Narrow	Square	Two-Tone
ce965c4d-7a2b-4db6-9847-601747fa7812	Women's Styles	Wide	Rectangular	Black

Purchase	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

home_try_on

- The columns in the Quiz table are 'Question' and 'num_users'
- The columns in the home_try_on table are 'user_id', 'style', 'fit', 'shape', and 'color'
- The columns in the purchase table are 'user_id', 'product_id', 'style', 'model_name', 'color', and 'price'.

Warby's Purchase Funnel (Question #5)

- To analyze Warby's purchase funnel, we use a left join to combine the 3 tables in the previous slide, starting with top of the funnel (quiz table) and ending with the bottom of the funnel (purchase table).
 - To understand a user's movement thru the funnel we also create two columns, `is_home_try_on` and `is_purchase`, by evaluating if the user id in the browse (quiz) table exists in the `home_try_on` table and the purchase table. The `number_of_pairs` column from the `home_try_on` table is also included for later analysis
 - Ex: The user represented in the first row of the table took the quiz, tried on 3 pairs of glasses at home, but did not make a 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	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

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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

Actionable Insights (Question #6)

Overall Conversion Rates and Rate Comparison

- Using the funnel that was created through SQL in the previous slide, we can calculate overall conversion rates by aggregating across all rows. Furthermore, we can compare conversion rates from the different stages in the funnel quiz → home_try_on and home_try_on → purchase.

num_quiz	num_home	num_purchase	quiz_to_home	home_to_purchase
10	7	3	0.7	0.428571428571429

- From the table above, we see that a total of 10 users took the quiz. Of the 10 users that took the quiz 7, took pairs of glasses to try on at home. The quiz_to_home conversion rate is therefore 70%, as indicated in the column quiz_to_home. Of the 7 users that took pairs to try on at home, 3 users purchased the glasses. The home_to_purchase conversion rate is 42.86%, as indicated in the column 'home_to_purchase'.

*Note: Results indicative of only a sample of 10 (Limit 10) per instructions in original Capstone project question

Differences in Purchase Rates

- We can calculate the difference in purchase rates between customers who had 3 number_of_pairs with ones who had 5.

number_of_pairs	home_to_purhcase
Ø	Ø
3 pairs	0.5
5 pairs	0.3333333333333333

- In the table above, we see that the purchase rate for users who had 3 number_of_pairs was 50% while the users who had 5 number_of_pairs was 33.33%. Users with 3 pairs had a higher conversion rate than those with 5 pairs.

*Note: Results indicative of only a sample of 10 (Limit 10) per instructions in original Capstone project question

Most Common Responses to Quiz Questions

- From the original tables quiz, home_try_on, and purchase; we can also make calculations. From querying the quiz table, we can find the most common responses to the quiz questions.

question	response	max(num_response)
1. What are you looking for?	Men's Styles	242
2. What's your fit?	Narrow	208
3. Which shapes do you like?	Rectangular	141
4. Which colors do you like?	Tortoise	117
5. When was your last eye exam?	<1 Year	141

- From the query result above, it appears that a majority of the users were looking for Men's Styles, narrow fit, rectangular ship, tortoise color, and had their last eye exam <1 year.

Most Commonly Purchased Style

- From querying the purchase table, we can find the most common style purchased.

style	num_purchased
Women's Styles	252
Men's Styles	243

From the table above, we see that Women's Styles rather than Men's Styles were more commonly purchased.

Most Common Products Purchased

- From querying the purchase table, we can find the most common products purchased.

product_id	style	model_name	color	num_purchased
3	Men's Styles	Dawes	Driftwood Fade	63
10	Women's Styles	Eugene Narrow	Rosewood Tortoise	62
9	Women's Styles	Eugene Narrow	Rose Crystal	54
1	Men's Styles	Brady	Layered Tortoise Matte	52
6	Women's Styles	Olive	Pearled Tortoise	50
4	Men's Styles	Dawes	Jet Black	44
7	Women's Styles	Lucy	Elderflower Crystal	44
2	Men's Styles	Brady	Sea Glass Gray	43
8	Women's Styles	Lucy	Jet Black	42
5	Men's Styles	Monocle	Endangered Tortoise	41

- The table above shows that product id = 3 is the most commonly purchased product. 63 purchases were made of the Men's Styles Dawes Driftwood Fade glasses.
- Product_id = 10 was the second most commonly purchased product. 62 purchases were made of the Women's Styles Eugene Narrow Rose Crystal glasses.

Most Commonly Purchased Color

- From querying the purchase table, we can find the most commonly purchased colors. The first table shows the most commonly purchased color by style. Rosewood Tortoise is the most commonly purchased color in Women's styles while Driftwood Fade is the most commonly purchased color in Men's styles.
- The second table shows us the most commonly purchased colors irrelevant of styles. Overall, Jet Black is the most commonly purchased color. It comes in both men and women's styles.

color	WomenStyles	MenStyles
Rosewood Tortoise	62	0
Rose Crystal	54	0
Pearled Tortoise	50	0
Elderflower Crystal	44	0
Jet Black	42	44
Driftwood Fade	0	63
Layered Tortoise Matte	0	52
Sea Glass Gray	0	43
Endangered Tortoise	0	41

color	num_purchased
Jet Black	86
Driftwood Fade	63
Rosewood Tortoise	62
Rose Crystal	54
Layered Tortoise Matte	52
Pearled Tortoise	50
Elderflower Crystal	44
Sea Glass Gray	43
Endangered Tortoise	41

Most Commonly Purchased Model

- From querying the purchase table, we can find the most commonly purchased models. The first table shows the most commonly purchased models overall. Eugene Narrow is the most commonly purchased followed by Dawes.
- The second table shows us the most commonly purchased models by style. By looking at the models by style, we see that Eugene Narrow, Lucy, and Olive models are exclusive to Women's styles while Dawes, Brady, and Monocle are exclusive to Men's styles. Eugene Narrow is the most commonly purchased model for women's styles and Dawes is the most commonly purchased model for men's styles.

model_name	num_purchased	
Eugene Narrow	116	
Dawes	107	
Brady	95	
Lucy	86	
Olive	50	
Monocle	41	

model_name	WomenStyles	MenStyles
Eugene Narrow	116	0
Lucy	86	0
Olive	50	0
Dawes	0	107
Brady	0	95
Monocle	0	41

Thank You