



Warby Parker's funnel

Capstone: Learn SQL from Scratch

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1. Columns in Quiz Funnel

The table has three columns, namely: question, user_id and response. The questions are 5 known questions such as what are you looking for? All the way to when was your last eye exam. The user_ids aren't particularly interesting other than that they identify the customer by a combination of letters and numbers. The responses indicate the answer customers have given to the question, which is interesting to say the least.

Command used:

```
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
1. What are you looking for?	00a556ed-f13e-4c67-8704-27e3573684cd	I'm not sure. Let's skip it.

2 Funnel count

As you can see the number of people that answer the survey questions decreases as they get closer to the end. This is natural, they must know they are being caught in a funnel! I'd almost feel bad if it weren't that Warby Parker also does good!

question	count(*)
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

```
SELECT question, COUNT(*)  
FROM survey  
GROUP BY question;
```

3. Percentage completed per question

According to these results questions 4 and 5 have a lower completion rate compared to the rest. Actually the completion lowers further down the funnel we go, as we get more personal. This is normal.

question	count(*)	column3
1. What are you looking for?	500	25,18% of total
2. What's your fit?	475	23,92% of total
3. Which shapes do you like?	380	19,13% of total
4. Which colors do you like?	361	18,18% of total
5. When was your last eye exam?	270	13,6% of total

Using google spreadsheets with the following formula I calculated the percentage completed per question: = Round(B3/\$B\$8 * 100; 2)

4. Warby Parker's purchase funnel

Using the following code: SELECT *
FROM quiz
LIMIT 5;

And the same for home_try_on and purchase on the FROM line.

I got 5 (quiz), 3(home_try_on) and 6(purchase) columns. Visualized in the following table below.

Table	column1	column2	column3	column4	column5	column6
quiz	User_id	style	fit	shape	color	
home_try_on	User_id	Number of pairs	address			
purchase	User_id	Product_id	style	Model_name	color	price

5. Funneltable: tried on and purchased

To get the following table we put in the code on the right. Used the first part of user_id for readability purposes. 1 = true, 0 = false. X is missing.

User_id	Is_home_try_on	Number_of_pairs	Is_purchase
4e8118dc	1	3 pairs	0
75122300	0	X	0
75bc6ebd	1	5 pairs	0

```
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 AS 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;
```

6.1 One code to rule them all

This is the code I used to answer the final questions

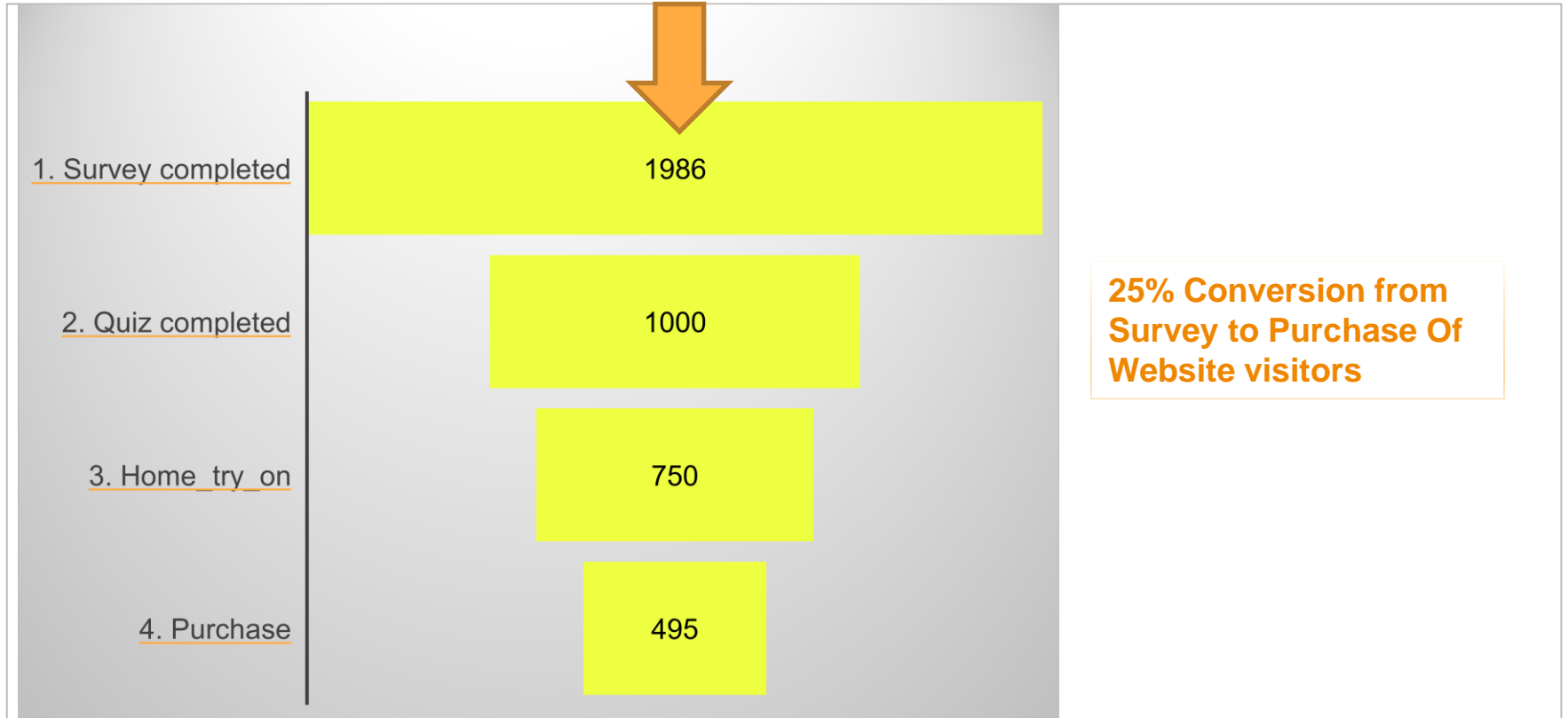
```
WITH results AS (  
  SELECT DISTINCT q.user_id,  
    h.user_id IS NOT NULL AS 'is_home_try_on',  
    h.number_of_pairs,  
    p.user_id IS NOT NULL AS 'is_purchase'  
  FROM quiz AS q  
  LEFT JOIN home_try_on AS h  
    ON q.user_id = h.user_id  
  LEFT JOIN purchase AS p  
    ON p.user_id = q.user_id)  
SELECT COUNT(*) AS 'conversion_rates',
```

```
  COUNT(  
    CASE  
      WHEN is_home_try_on = 1 THEN user_id  
      ELSE NULL  
    END) AS 'num_triedon',  
  COUNT(  
    CASE  
      WHEN is_purchase = 1 THEN user_id  
      ELSE NULL  
    END) AS 'num_purchase',  
  1.0 * SUM(is_home_try_on) / COUNT(user_id) AS '%quiztotryout',  
  1.0 * SUM(is_purchase) / SUM(is_home_try_on) AS '%tryouttopurchase',  
  1.0 * SUM(number_of_pairs = '3 pairs') / SUM(is_purchase) AS '%3pairsbought',  
  1.0 * SUM(number_of_pairs = '5 pairs') / SUM(is_purchase) AS '%5pairsbought'  
  FROM results ;
```

```
SELECT model_name, COUNT(*)  
FROM purchase  
GROUP BY model_name;
```

```
SELECT price, model_name  
FROM purchase  
GROUP BY model_name
```


6.2 Insights for Warby Parker: Marketing Funnel



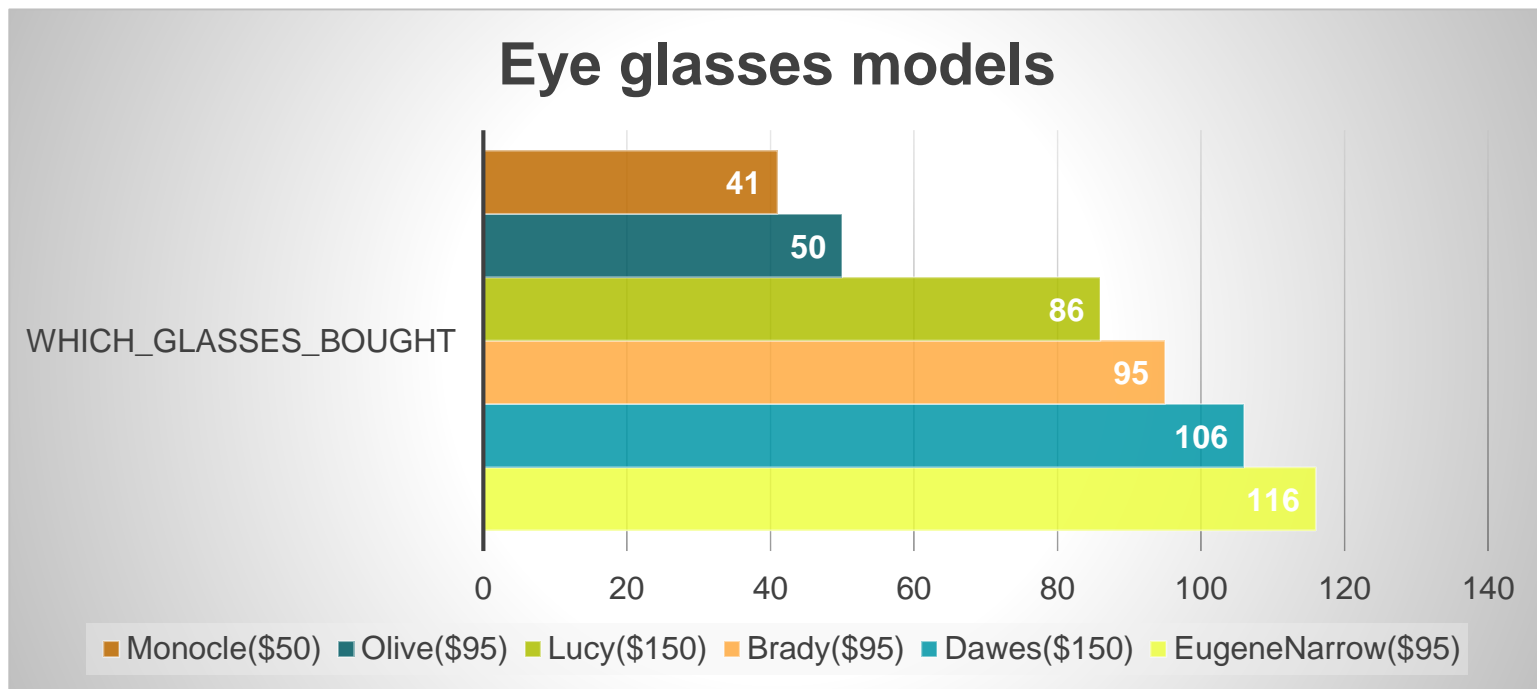
6.3 Insights for Warby Parker: Funnel explained

- Overall conversion rates are 1000 out of 1986. So about 50% go from the survey to the home_try_on phase.
- Conversion for quiz to home_try_on is 75%
- Conversion for **home_try_on** to **purchase** is 66%
- This gives us the insight that any given user that goes into the funnel of Warby Parker (e.g. starts the survey on the website) has a 24.75% chance of buying something ($0.5 * 0.75 * 0.66 = 0.2475$). Not bad at all I'd say.
- The chance of purchase from the home_try out phase with 3 pairs of glasses is 76,6%. The chance of purchase from home_try_out phase with 5 pairs of glasses is 75,5%. This gives us the insight that giving users less options yields a higher chance of them purchasing, albeit very small. Doubtfully statistically significant. So I would keep the options as is for now.
- The most common results of the style quiz are as follows:

```
SELECT style, COUNT(*)  
FROM quiz  
GROUP BY style;
```

style	COUNT(*)
I'm not sure. Let's skip it.	99
Men's Styles	432
Women's Styles	469

6.4 Insights for Warby Parker: Glasses bought table



6.5 Insights for Warby Parker: total revenue

Using the data derived from SQL and putting it into Google Spreadsheets I came up with the following results for total revenue:

model	total earned
monocle	\$2050
olive	\$4750
lucy	\$12900
brady	\$9025
dawes	\$15900
eugenena rrow	\$11020
	\$55645

6.6 Insights for Warby Parker: Analysis and advise

```
SELECT fit, COUNT(*)  
FROM quiz  
GROUP BY fit;
```

>

fit	COUNT(*)
I'm not sure. Let's skip it.	89
Medium	305
Narrow	408
Wide	198

- The sizes medium and narrow are more common than wide, this means Warby Parker can act upon this with their stocking process: more focus on these models and less on the wide model.
- The same applies for the model's which are more popular such as Eugene Narrow and Dawes, they need to be well available. If this is not the case then the price needs to be raised so that the model's will not run out of stock. E.g. Eugene Parker is only \$95 now and could be raised to \$150 since Dawes is \$150 and is also very popular (106 purchases vs 116 by Eugene Parker). Furthermore since a narrow fit is most popular this also justifies the price bump.