codecademy

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Learn SQL from Scratch

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Analysis of Data

Quiz Funnel

- Assuming that all customers answer the first question, we can see that 95% answer the second as well. However, 20% of users fail to get beyond the question on shape.
    - This may be due to the fact that users tend to not have strong opinions on shape or may not want to answer subjective questions.
- 25% of users fall off on the final question regarding eye exam.
    - Users may not know this info or don't want to check.

Question	Response Count	Churn
1. What are you looking for?	500	
2. What's your fit?	475	5%
3. Which shapes do you like?	380	20%
4. Which colors do you like?	361	5%
5. When was your last eye exam?	270	25.2%

```
select question, count(question) as responses
from survey
group by 1;
```

Quiz Funnel

- In looking at possible reasons for the increased churn on the final question I wanted to know what the answers looked like.
- It appears that the majority of people who answered said that it was within the last year.
- Even with the option to skip the question people still didn't answer it.
- If this question is not vital, it might be best to remove it from the survey.

Last Eye Exam	Answer	Number
5. When was your last eye exam?	1-3 Years	56
5. When was your last eye exam?	3+ Years	37
5. When was your last eye exam?	<1 Year	141
5. When was your last eye exam?	Not Sure. Let's Skip It	36

```
select question, response, count(*) as number
from survey
group by 1, 2;
```

Home Try On Funnel

- Of 1000 total users who were sent the quiz, 25% did not complete it.
- 34% of users who advanced to the home try on stage did not purchase
- With 495 purchases off of 1000 initial Quizes, there is an overall churn rate of 50.5%

Tried On	Purchased	Number	Churn
FALSE	FALSE	250	
TRUE	FALSE	255	25%
TRUE	TRUE	495	34%

```
with funnel as(select q.user_id,
case
   when h.user_id not null then 'TRUE'
   else 'FALSE'
   end as is_home_try_on,
h.number_of_pairs,
case
   when p.user_id not null then 'TRUE'
   else 'FALSE'
   end 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 h.user_id = p.user_id)
select is_home_try_on, is_purchase,
count(is_home_try_on) as number
from funnel
group by 1, 2;
```

Home Try On Funnel

- 379 users were sent 3 pairs to try on.
  - 201 of these made a purchase
  - This conversion rate is 53%
- 371 users were sent 5 pairs to try on.
  - 294 of these made a purchase
  - This conversion rate is 79%
- I can't speak to the statistical significance of this result, but it seems as if all users should be sent 5 pairs.

Purchased	Number of Pairs tried on	Number
FALSE	3 pairs	178
FALSE	5 pairs	77
TRUE	3 pairs	201
TRUE	5 pairs	294

```
with funnel as(select q.user_id,
case
when h.user_id not null then 'TRUE'
else 'FALSE'
end as is_home_try_on,
h.number_of_pairs,
case
when p.user_id not null then 'TRUE'
else 'FALSE'
end 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 h.user_id = p.user_id)
select is_purchase, number_of_pairs,
count(is_purchase) as number
from funnel
where number_of_pairs not null
group by 1, 2;
```

Survey results

- There’s a fairly even split between men and women
- Round is chosen much less than other shapes

```
select style, count(style) as number
from quiz
group by 1;
```

Style	Answered
I'm not sure. Let's skip it.	99
Men's Styles	432
Women's Styles	469

```
select shape, count(*) as number
from quiz
group by 1;
```

Shape	Answered
No Preference	97
Rectangular	397
Round	180
Square	326

Purchase Results

- The fewest number of users purchased at the $50 price point
- $95 is the most popular price
- The highest gross sales came from the $150 price point

Price	Purchased
50	41
95	261
150	193

```
select price, count(*) as cost
from purchase
group by 1;
```

Purchase Results

- Eugene Narrow is the most popular model, followed closely by Dawes.
- The Monocle is the least popular model followed closely by Olive.

Model	Number Purchased
Brady	95
Dawes	107
Eugene Narrow	116
Lucy	86
Monocle	41
Olive	50

```
select model_name, count(*) as number
from purchase
group by 1;
```

Purchase Results

- A list of Models sold by color
  - There doesn't seem to be much difference between colors.

Model	Color	Number Sold
Brady	Layered Tortoise Matte	52
Brady	Sea Glass Gray	43
Dawes	Driftwood Fade	63
Dawes	Jet Black	44
Eugene Narrow	Rose Crystal	54
Eugene Narrow	Rosewood Tortoise	62
Lucy	Elderflower Crystal	44
Lucy	Jet Black	42
Monocle	Endangered Tortoise	41
Olive	Pearled Tortoise	50

```
select model_name, color, count(*) as number
from purchase
group by 1, 2;
```

Purchase Results

- A list of Product ID's sold
  - All products were purchased between 41 and 63 times
- Though the Monocle and Olive models had low purchase counts, it appears that their lack of color choices has resulted in them being purchased in similar numbers to other products.

Product ID	Number Sold
1	52
2	43
3	63
4	44
5	41
6	50
7	44
8	42
9	54
10	62

```
select product_id, count(product_id) as number
from purchase
group by 1;
```

Comments

Comments

1. Send all users 5 pairs
2. Record data for pairs sent for try on
    - I wanted to analyse the data depending on which pairs users received to try on, but that data does not seem to be available in the table. Knowing this would allow for better selection of pairs to send based on quiz results.