SQL Capstone Templates

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codecademy

Warby Parker Capstone

Learn SQL from Scratch

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1. Warby Parker

1.1 Warby Parker

Warby Parker is a transformative lifestyle brand with a lofty objective: to offer designer eyewear at a revolutionary price while leading the way for socially conscious businesses. Founded in 2010 and named after two characters in an early Jack Kerouac journal, Warby Parker believes in creative thinking, smart design, and doing good in the world. For every pair of eyeglasses and sunglasses sold, a pair is distributed to someone in need.

1.2 Warby Parker Sales Process

The Warby Parker sales process is unique and provides consumers with a user friendly experience.

- To assist consumers find the perfect pair of eyewear Warby Parker provides a Style Quiz, which filters frame selection based on consumer input and preferences.
- After completion of the Style Quiz consumers have the option to select a limited number of frames to be shipped to them for Home Try-On.
- The Home Try-On period lasts for 5 days at the end of which consumers return the frames using the original box and a pre-paid return label.
- If a consumer finds a frame they want to purchase they can order online and will receive a new frame with their lens prescription.

2. Style Quiz Funnel

2.1 Style Quiz Funnel

The Style Quiz provides consumers with a clear process to select the perfect frames, but also provides insight for Warby Parker to best meet consumer demand.

The Style Quiz consists of 5 questions:

1. What are you looking for?
2. What's your fit?
3. Which shapes do you like?
4. What colors do you like?
5. When was your last eye exam?

The Style Quiz results are stored in a table called 'survey' and the columns for the table are:

- question
- user_id
- response

```
-- Quiz Funnel  - Task 1

SELECT *
FROM survey
LIMIT 10;
```

2.2 Style Quiz Funnel Results

- The style quiz included results from 500 distinct users with all users answering **Question 1**. This is to be expected as the answer is either Men's Styles or Women's Styles and users will choose the gender they identify with.
- **Question 2** is also easy to answer as it asks the fit, which considers the shape of the users face, which they can look into a mirror to determine if they don't already know.
- **Questions 3 and 4** are a bit more subjective questions and are likely the reason users are taking the quiz – they are unsure of their preferred shapes and colors and are looking for guidance.
- **Question 5** has the lowest response rate and this could be caused by a number of factors:
  - Users don't get new glasses often and their eyesight has not changed thus there has been no need for an exam
  - Users know they need glasses but have not had an eye exam to determine prescription
  - Users feel there have been too many questions and want to simply browse

Question	Count of Users Answered	Percentage Answered
1. What are you looking for?	500	100%
2. What's your fit?	475	95%
3. What shapes do you like?	380	76%
4. Which colors do you like?	361	72%
5. When was your last eye exam?	270	54%

```
-- Quiz Funnel - Task 2

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

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

3.1 A/B Testing with Home Try-On Funnel

Once a user reaches the Home Try-On stage, Warby Parker will conduct A/B testing:

- 50% of users will get 3 pairs to try on
- 50% of users will get 5 pairs to try on

Data for the A/B test will be hosted across three tables containing different information but all having the primary key ‘user_id’

- quiz
- home_try_on
- purchase

Table Name	quiz	home_try_on	purchase
Column 1	user_id	user_id	user_id
Column 2	style	number_of_pairs	product_id
Column 3	fit	address	style
Column 4	shape		model_name
Column 5	color		color
Column 6			price

```
-- Home Try-On Funnel - Task 4

SELECT *
FROM quiz
LIMIT 5;

SELECT *
FROM home_try_on
LIMIT 5;

SELECT *
FROM purchase
LIMIT 5;
```

3.2 A/B Testing with Home Try-On Funnel Results

After joining the tables related to the A/B Home Try-On test it is possible to analyze performance

OVERALL HOME TRY-ON:

Home try-on period results in a strong conversion rate. Getting users to this step is vital for sales.

- 66% of home try-on users purchased a pair of glasses regardless of the number of try-on pairs they were supplied.
- 0 purchases from users who did not take advantage of the home try-on option.

A/B TESTING:

5 pairs supplied for home try-on resulted in a 26% higher purchase percentage than 3 pairs for home try-on.

Home Try-On Pairs	Purchase %
3 pairs	53%
5 pairs	79%

```
-- Home Try-On Funnel - Task 5

SELECT DISTINCT quiz.user_id,
  CASE home_try_on.user_id IS NOT NULL
    WHEN 1 THEN 'True'
    ELSE 'False'
  END AS 'is_home_try_on',
  CASE home_try_on.number_of_pairs
    WHEN '3 pairs' THEN 3
    WHEN '5 pairs' THEN 5
    ELSE 'Null'
  END AS 'number_of_pairs',
  CASE purchase.user_id IS NOT NULL
    WHEN 1 THEN 'True'
    ELSE 'False'
    END AS 'is_purchase'
FROM quiz
LEFT JOIN home_try_on
  ON quiz.user_id = home_try_on.user_id
LEFT JOIN purchase
  ON purchase.user_id = quiz.user_id
LIMIT 10;

-- LIMIT 10; removed for full analysis of A/B
Test
```

4. Actionable Insights / Conclusions

4.1 Actionable Insights - Conclusions

- Offer 5 pairs for the home try-on period to increase purchases by 26%.
- For forecasting purposes the average purchase is $112.72
- No need to focus on a specific gender – male and female purchases were nearly identical in number.
- Stock more narrow and medium fits.
- Stock more or add additional rectangular and square styles.

```
-- Analyze - Task 6

SELECT MAX(price)
FROM purchase;

SELECT MIN(price)
FROM purchase;

SELECT ROUND(AVG(price), 2) AS
'avg_price'
FROM purchase;

SELECT style,
  COUNT(style)
FROM purchase
GROUP BY 1
ORDER BY 2 DESC;

SELECT model_name,
  COUNT(model_name)
FROM purchase
GROUP BY 1
ORDER BY 2 DESC;
```

```
-- Analyze - Task 6 con't

SELECT color,
  COUNT(color)
FROM purchase
GROUP BY 1
ORDER BY 2 DESC;

SELECT fit,
  COUNT(fit)
FROM quiz
GROUP BY 1
ORDER BY 2 DESC;

SELECT shape,
  COUNT(shape)
FROM quiz
GROUP BY 1
ORDER BY 2 DESC;

SELECT color,
  COUNT(color)
FROM quiz
GROUP BY 1
ORDER BY 2 DESC;
```