Attribution Queries Project Summary

Learn SQL from Scratch
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1. Get familiar with CoolTShirts.

1.1 How many campaigns and sources does CoolTShirts use and how are they related? Be sure to explain the difference between utm_campaign and utm_source.

- Utm_campaign: Identifies the specific ad or email blast (i.e., june-21-newsletter or memorial-day-sale)
- Utm_source: Identifies which site sent the traffic (i.e., google, newsletter, or facebook_ad)
- Distinct campaign count = 8
- Distinct source count = 6
- Each campaign comes from a source. Each campaign must have a venue for that campaign to be run on.

```sql
SELECT COUNT(DISTINCT utm_campaign)
FROM page_visits;

SELECT COUNT(DISTINCT utm_source)
FROM page_visits;

SELECT DISTINCT utm_campaign, utm_source
FROM page_visits;
```

1.2 What pages are on their website?

1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase

```
SELECT DISTINCT page_name
FROM page_visits;
```

2. What is the user journey?

2.1 How many first touches is each campaign responsible for?

ft_attr.utm_source	ft_attr.utm_campaign	COUNT(*)
medium	interview-with-cool-tshirts-founder	622
nytimes	getting-to-know-cool-tshirts	612
buzzfeed	ten-crazy-cool-tshirts-facts	576
google	cool-tshirts-search	169

```
WITH first_touch AS (
    SELECT user_id,
        MIN(timestamp) as first_touch_at
    FROM page_visits
    GROUP BY user_id),
    ft_attr AS (
    SELECT ft.user_id,
        ft.first_touch_at,
        pv.utm_source,
        pv.utm_campaign
    FROM first_touch ft
    JOIN page_visits pv
        ON ft.user_id = pv.user_id
        AND ft.first_touch_at = pv.timestamp
)
SELECT ft_attr.utm_source,
    ft_attr.utm_campaign,
    COUNT(*)
FROM ft_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

2.2 How many last touches is each campaign responsible for?

lt_attr.utm_source	lt_attr.utm_campaign	COUNT(*)
email	weekly-newsletter	447
facebook	retargetting-ad	443
email	retargetting-campaign	245
nytimes	getting-to-know-cool-tshirts	232
buzzfeed	ten-crazy-cool-tshirts-facts	190
medium	interview-with-cool-tshirts-founder	184
google	paid-search	178
google	cool-tshirts-search	60

```
WITH last_touch AS (
    SELECT user_id,
        MAX(timestamp) as last_touch_at
    FROM page_visits
    GROUP BY user_id),
    lt_attr AS (
    SELECT lt.user_id,
        lt.last_touch_at,
        pv.utm_source,
        pv.utm_campaign
    FROM last_touch lt
    JOIN page_visits pv
        ON lt.user_id = pv.user_id
        AND lt.last_touch_at = pv.timestamp
)
SELECT lt_attr.utm_source,
    lt_attr.utm_campaign,
        COUNT(*)
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

2.3 How many visitors make a purchase?

COUNT(user_id)
361

```
SELECT DISTINCT COUNT(user_id)
FROM page_visits
WHERE page_name = '4 - purchase';
```

2.4 How many last touches *on the purchase page* is each campaign responsible for?

lt_attr.utm_source	lt_attr.utm_campaign	COUNT(*)
email	weekly-newsletter	115
facebook	retargetting-ad	113
email	retargetting-campaign	54
google	paid-search	52
buzzfeed	ten-crazy-cool-tshirts-facts	9
nytimes	getting-to-know-cool-tshirts	9
medium	interview-with-cool-tshirts-founder	7
google	cool-tshirts-search	2

```
WITH last_touch AS (
    SELECT user_id,
        MAX(timestamp) as last_touch_at
    FROM page_visits
    WHERE page_name = '4 - purchase'
    GROUP BY user_id),
    lt_attr AS (
    SELECT lt.user_id,
        lt.last_touch_at,
        pv.utm_source,
        pv.utm_campaign
    FROM last_touch lt
    JOIN page_visits pv
        ON lt.user_id = pv.user_id
        AND lt.last_touch_at = pv.timestamp
)
SELECT lt_attr.utm_source,
    lt_attr.utm_campaign,
        COUNT(*)
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

2.5 What is the typical user journey?

Users are typically introduced to the CoolTShirts website by one of the following campaigns: Interview with CoolTShirts Founder, Getting to Know CoolTShirts, Ten Crazy CoolTShirts Facts, or CoolTShirts Search. These campaigns introduce users to the CoolTShirts site, but usually do not push users to make a purchase. Users usually make a purchase after seeing another campaign, most commonly Weekly Newsletter or Retargeting Ad.

Sample User Journey

Interview with CoolTShirts Founder

(First Touch)

→

Weekly Newsletter
(Last Touch)

→

Purchase

3. Optimize the campaign budget.

3.1 CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?

- CoolTShirts should invest in a combination of highly attracting first-touch campaigns, and highly attracting last touch campaigns that hit the purchase page. This would result in CoolTShirts prioritizing the campaigns that spread awareness of their products and the campaigns that result in t-shirt sales.
- My suggestions for CoolTShirts campaign reinvestments are listed in the table on the right.

Campaign Name
interview-with-cool-tshirts-founder
getting-to-know-cool-tshirts
ten-crazy-cool-tshirts-facts
weekly-newsletter
retargetting-ad