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First And Last Touch Attribution Project
Learn SQL from Scratch
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12/08/2017

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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

- CoolTShirts uses 8 campaigns and 6 sources..

- utm_campaign identifies the specific ad or email blast, while utm_source identifies which site sent the traffic.

utm_campaign	utm_source
getting-to-know-cool-tshirts	nytimes
weekly-newsletter	email
ten-crazy-cool-tshirts-facts	buzzfeed
retargetting-campaign	email
retargetting-ad	facebook
interview-with-cool-tshirts-founder	medium
paid-search	google
cool-tshirts-search	google

1.2 What pages are on their website?

page_name

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

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

```
-- You can put your query here
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 AS 'utm_source',
    ft_attr.utm_campaign AS 'utm_campaign',
    COUNT(*) AS 'no of ft'
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

```sql
-- You can put your query here
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,
        pv.page_name
  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 AS 'utm_source',
      lt_attr.utm_campaign AS 'utm_campaign',
      COUNT(*) AS 'no of lt'
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

2.3 How many visitors make a purchase?

361 visitors made purchases.

```
-- You can put your query here
SELECT COUNT(DISTINCT user_id) AS 'number of users
that made purchases'
FROM page_visits
WHERE page_name = '4 - purchase';
```

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

utm_source	utm_campaign	No of lt
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

```sql
-- You can put your query here
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,
        pv.page_name
   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 AS 'utm_source',
      lt_attr.utm_campaign AS 'utm_campaign',
      COUNT(*) AS 'no of lt'
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

2.5 What is the typical user journey?

landing_page ⇒ shopping_cart ==>checkout==>purchase

3. Optimize the campaign budget

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

1. Weekly-newsletter
2. Retargetting-ad
3. Retargetting-campaign
4. Paid-search
5. Ten-crazy-cool-tshirts-facts

These above mentioned are the 5 campaigns CoolTShirts can re-invest in because they draw more traffic to the site.