

Attribution Queries

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?

- CoolTShirts uses six (6) sources to run their eight (8) ad campaigns.
- Each source (touchpoint) that CoolTShirts uses can run multiple ad campaigns (ad type).

| Campaign | 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 |

```
-- 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;
```

1.1 What pages are on their website?

CoolTShirts is a small site with 4 pages.

| CoolTShirt_Sitemap |
|--------------------|
| 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  
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 made a purchase?

| COUNT (DISTINCT user_id) |
|--------------------------|
| 361 |

```
-- SELECT COUNT (DISTINCT 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?

A typical CoolTShirt user discovered the company through a recorded(?) interview with the founder or an ad campaign run on different online sources.

Ultimately, customers that have made a purchase through the site did this after receiving either the companies weekly newsletter or through social media retargeting ad.

So the journey would be; come in contact with company > browse away > view retargeting ad > click to make purchase

3. Optimize the campaign budget

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

Based on purchasing, the campaigns that seem to result in sales are the:

1. Email – Weekly newsletter
2. Facebook – Retargeting ads
3. Email – Retargeting Campaign
4. Google – Paid Search
5. A toss up between BuzzFeed & Nytimes -> While NYtimes has driven more traffic to the site, the BuzzFeed article has achieved just as many sales with less traffic. So, regardless of more traffic, I would choose BuzzFeed as I believe by looking at the name of the company, the content would fit better with Buzzfeeds audience as opposed to NYTimes.