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First- and Last-Touch Attribution with CoolTShirts.com

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1.Getting familiar with the company

Campaigns and Sources

First we can see how many pages are on their website. By using the first query to the right we see that there are 4: 1 - landing_page; 2 - shopping_cart; 3 – checkout; 4 - purchase

Next, we will look at how many campaigns and sources CoolTShirts uses and how they are related. Let's define campaigns and sources:
- Source: Identifies which touchpoint sent the traffic (e.g. google, email, or facebook)
- Campaign: Identifies the specific ad or email blast (e.g. retargetting-ad or weekly-newsletter)

In the second and third queries to the right, we will see how to get the data to see how many distinct campaigns and sources
Our query shows that CoolTShirts has:
- 8 distinct campaigns
- 6 distinct sources

```
SELECT DISTINCT page_name FROM page_visits;


SELECT COUNT (DISTINCT utm_campaign) FROM page_visits;


SELECT COUNT (DISTINCT utm_source) FROM page_visits;
```

We can see which campaign comes from which source

- Now we can see how they are related by using the following query below and the results to the right:

- SELECT DISTINCT utm_campaign, utm_source FROM page_visits;

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

2. What is the user journey?

User Journey – first touch

We can see how many first touches each campaign is responsible for by using the query to the right. The results are below:

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;
```

User Journey – last touch

We can also see how many last touches each campaign is responsible for by using the query to the right. The results are below:

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,
         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,
       lt_attr.utm_campaign,
       COUNT(*)
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

We can see how many last touches on the purchase page each campaign is responsible for by using the query to the right. The results are below:

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,
       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,
     lt_attr.utm_campaign,
     COUNT(*)
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

We can see how many visitors make a purchase by using the first query on the right. We get 361.

The typical user journey would then look like:

- A user will typically find the website through medium, nytimes, or buzzfeed and browse the site and, while there, can sign up for email alerts
- Typically a user will come back to the site and make a purchase from the weekly email or a facebook ad

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

3. Optimize the campaign budget

Optimize the campaign budget

In order to optimize the campaign budget to get as many purchases as possible, it is recommended that CoolTShirts re-invest in the following 5 campaigns:

- Weekly newsletter from email

- Retargeting ad from facebook

- Paid search from google

- Ten Crazy Cool Shirts Facts from buzzfeed

- Getting to know Cool Tshirts from nytimes

Optimize the campaign budget

- These 5 campaigns are where most purchases come from as well as how most users find the site initially. It would make sense to invest in these areas since they have proven to be an excellent source for user purchases.