



Marketing Attribution: Cool TShirts

Analyze Data with SQL

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Questions

1. How many campaigns and sources does CoolTShirts use?
2. How are they related?
3. What pages are on their website?
4. How many *first* touches is each campaign responsible for?
5. How many *last* touches is each campaign responsible for?

Questions

6. How many visitors make a purchase?
7. How many last touches *on the purchase page* is each campaign responsible for?
8. What is the typical user journey?
9. CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?

1. The results

1.1 How many campaigns and sources does CoolTShirts use?

- CoolTShirts has all together 8 campaigns and 6 sources
- Campaigns are for example advertising campaign or a Newsletter
- Sources are the platform where that campaign is on display, for example New York Times or E-mail (for the Newsletter)

```
-- Number of the distinct campaigns
SELECT COUNT(DISTINCT utm_campaign)
FROM page_visits;

-- Number of distinct sources
SELECT COUNT(DISTINCT utm_source)
FROM page_visits;
```

Campaign

8

Source

6

1.2 How are the campaigns and sources related?

- Down below you can see where (what source) each campaign was on display
- For example, the interview with the Cool Tshirts Founder was in Medium and the retargeting campaign happened through e-mail

```
-- How they are related
SELECT DISTINCT utm_campaign, utm_source
FROM page_visits;
```

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

1.3 What pages are on their website?

The Cool Tshirts has four pages on the website:

1. The landing page
2. The Shopping Cart
3. The Checkout page and
4. The purchase page

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

```
--Pages that are on the CoolTShirts website  
SELECT DISTINCT(page_name)  
FROM page_visits;
```

1.4 How many *first* touches is each campaign responsible for?

- First touch refers to the first interaction a user has with a website, capturing the source that initially brought them there. For example, if a user clicks a link in an interview article to visit a website for the first time, the article is the "first touch" source.
- Here you can see that four of those eight campaigns are responsible for first touches
- The interview with the founder of Cool Tshirt and two advertisement campaigns have most of the first touches

Campaign	Source	First touch count
interview-with-cool-tshirts-founder	medium	622
getting-to-know-cool-tshirts	nytimes	612
ten-crazy-cool-tshirts-facts	buzzfeed	576
cool-tshirts-search	google	169

```
--How many first touches for each campaign?
WITH first_touch AS (
    SELECT user_id,
           MIN(timestamp) as
first_touch_at
    FROM page_visits
    GROUP BY user_id
),
ft_att 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_att.utm_campaign,
       ft_att.utm_source,
       COUNT(*) AS first_touch_count
FROM ft_att
GROUP BY 1
ORDER BY 3 DESC;
```


1.5 How many *last* touches is each campaign responsible for?

- Last touch refers to the last time a person visits the website. For example, if a person visits a website but doesn't complete a purchase, then later sees a retargeting ad on Facebook and clicks it to return and make the purchase, the Facebook ad is the "last touch" source.
- The weekly Newsletter campaign and retargeting ad have 45 % of the last touches

Campaign	Source	Last touch count
weekly-newsletter	email	447
retargeting-ad	facebook	443
retargeting-campaign	email	245
getting-to-know-cool-tshirts	nytimes	232
ten-crazy-cool-tshirts-facts	buzzfeed	190
interview-with-cool-tshirts-founder	medium	184
paid-search	google	178
cool-tshirts-search	google	60

```
--How many last touches for each campaign?
WITH last_touch AS (
    SELECT user_id,
           MAX(timestamp) as last_touch_at
    FROM page_visits
    GROUP BY user_id),
lt_att 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_att.utm_campaign,
       lt_att.utm_source,
       COUNT(*) AS last_touch_count
FROM lt_att
GROUP BY 1
ORDER BY 3 DESC;
```

1.6 How many visitors make a purchase?

- From all the people who visit the website, 361 make a purchase
- 1979 people visit the website all together
- 18 % of the people who visit the website, also make a purchase

```
-- How many visitors purchase?  
SELECT COUNT(*) AS all_who_purchase  
FROM page_visits  
WHERE page_name = '4 - purchase';  
--How many visitors?  
SELECT COUNT(DISTINCT user_id) AS  
all_who_visit  
FROM page_visits;
```

All who purchase

361

All who visit

1979

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

- Weekly Newsletter from e-mail and the retargeting ad on Facebook are responsible for 63 % of the last touches on the purchase page so they are very valuable campaigns
- The retargeting campaign from e-mail and the Google paid search are responsible for the next 29 %

Campaign	Source	Last touch count
weekly-newsletter	email	115
retargeting-ad	facebook	113
retargeting-campaign	email	54
paid-search	google	52
ten-crazy-cool-tshirts-facts	buzzfeed	9
getting-to-know-cool-tshirts	nytimes	9
interview-with-cool-tshirts-founder	medium	7
cool-tshirts-search	google	2

```
--How many purchases from each campaign?
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_att 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_att.utm_campaign,
       lt_att.utm_source,
       COUNT(*) AS last_touch_count
FROM lt_att
GROUP BY 1
ORDER BY 3 DESC;
```

1.8 What is the typical user journey?

- A typical route to arrive to the website is through one of the three campaigns with most *first touches*: The interview with the Cool Tshirts founder at Medium, Getting-to-know-CoolTShirts-article at New York Times and the Ten-crazy-Cool-Tshirts-Facts at BuzzFeed.
- The typical way to come back to the website later on is through The weekly Newsletter campaign through e-mail and retargeting ad on Facebook, which have 45 % of the last touches. The next two campaigns with the most last touches are the Retargeting campaign through e-mail and the Getting-to-know-CoolTShirts-article at New York Times.
- The last touches that also lead into a purchase are the Weekly Newsletter through e-mail and the retargeting ad on Facebook, which are responsible for 63 % of the last touches.

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

After analysing what is the typical user journey, I would recommend the next campaigns to be reinvested in:

1. An interview at Medium
2. An article at New York Times
3. An article at Buzzfeed
4. A weekly Newsletter through E-mail and
5. A retargeting ad on Facebook

The first three campaigns account for 91% of the people who come to the website. The last two campaigns play a key role in bringing back nearly half of the returning visitors, and of those returning visitors who make a purchase, these two campaigns are responsible for 63 %.