



# Capstone Project: Attribution

Learn SQL from Scratch

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# 1. Getting Familiar with CoolTShirts

## 1.1 Campaigns and Sources

- The Campaigns are the specific ad or email blast that brings the user to the CoolTShirts Website
- The Sources identify which touchpoint sent the traffic to the CoolTShirts website

Campaigns	Sources
getting-to-know-cool-tshirts	nytimes
weekly-newsletter	email
ten-crazy-cool-tshirt-facts	buzzfeed
retargetting-campaign	email
retargetting-ad	facebook
interview-with-cool-tshirts-founder	meduim
paid-search	google
cool-tshirts-search	google

## 1.2 CoolTShirt Websites

- The CoolTShirt Website consists of 4 pages

CoolTShirts Website Pages
landing_page
shopping_cart
checkout
purchase

## 2. What is the user journey?

## 2.1 Campaign First Touches

The First Touch is the first time that a user is introduced to the CoolTShirts website.

Campaign	Count
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-each	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 Campaign Last Touches

- The Last Touch is the last time that a user is visiting the CoolTShirts website.
- 361 visitors made a purchase

Last Touch Campaign	Count	Last Touch Campaign	Count
weekly-newsletter	447	ten-crazy-cool-tshirts-facts	190
retargetting-ad	443	interview-with-cool-tshirts-founder	184
retargetting-campaign	245	paid-search	178
getting-to-know-cool-tshirts	232	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;  
  
SELECT COUNT(DISTINCT user_id)  
FROM page_visits  
WHERE page_name = '4 - purchase';
```



## 2.3 Last Touch Purchases

- A list of the last touches on the purchase page that each campaign is responsible for:

Last Touch Campaign	Count	Last Touch Campaign	Count
weekly-newsletter	115	ten-crazy-cool-tshirts-facts	9
retargetting-ad	113	Getting-to-know-cool-tshirts	9
retargetting-campaign	54	interview-with-cool-tshirts-founder	7
Paid-search	52	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;
```

### 3. Optimizing Campaign Budget

## 3.1 CoolTShirts Campaign Reinvestments

- CoolTShirts should reinvest in the top 3 First Touch campaigns that bring users to its website

First Touch Campaign	Count
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576

- CoolTShirts should reinvest in the top two Last Touch campaigns that result in the most customer purchases

Last Touch Campaign	Count
weekly-newsletter	115
retargeting-ad	113