



CoolTShirts Project

Learn SQL from Scratch

By: Jason Irvine

7/09/2018

Table of Contents

1. Get Familiar with CoolTShirts
2. What Is The User Journey?
3. Optimize The Campaign Budget

1. Get Familiar with CoolTShirts

1.1 Get Familiar with CoolTShirts

How many campaigns and sources does CoolTShirts use?

To answer this question I used the SQL (right frame)

Query Results	
COUNT(DISTINCT utm_campaign)	
	8
COUNT (DISTINCT utm_source)	
	6

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

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

1.2 Get Familiar with CoolTShirts

Which Source is used for each campaign?

To answer the above question I used the SQL(right frame)
Results are below.. Below is a list of the campaigns and sources for CoolTShirts. The results reflect the source used for each campaign and total.

Campaign	Total	Source	Total
paid-search	231	google	231
retargetting-campaign	300	email	300
cool-tshirts-search	313	google	313
retargetting-ad	558	facebook	558
weekly-newsletter	565	email	565
interview-with-cool-tshirts-founder	1178	medium	1178
ten-crazy-cool-tshirts-facts	1198	buzzfeed	1198
getting-to-know-cool-tshirts	1349	nytimes	1349

```
SELECT DISTINCT utm_campaign AS  
Campaign, COUNT(utm_campaign) AS Total,  
utm_source AS Source, COUNT(utm_source)  
AS Total  
FROM page_visits  
GROUP BY 1  
ORDER BY 2;
```

1.3 Get Familiar with CoolTShirts

What pages are on the CoolTShirts website?

For this question I used the SQL (right frame)
Results below..

Query Results
page_name
1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase

```
SELECT DISTINCT page_name
FROM page_visits
LIMIT 10;
```

2. What Is The User Journey?

2.1 What Is The Journey

How many first touches is each campaign responsible for?
To answer this question I used the SQL (right frame)

Query Results

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 (WITH first_touch AS (  
    SELECT user_id,  
           MIN(timestamp) as first_touch_at  
    FROM page_visits  
    GROUP BY user_id)  
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),  
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 What Is The Journey?

How many last touches is each campaign responsible for?
To answer this question I used the SQL (right frame)

Query Results		
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 (WITH last_touch AS (
    SELECT user_id,
           MAX(timestamp) as last_touch_at
    FROM page_visits
    GROUP BY user_id)
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),
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 What is The User Journey?

How many visitors make a purchase?

To answer this question I used the SQL(right frame)

Results below..

Query Results

COUNT(user_id)	page_name
361	4 - purchase

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

2.4 What is The User Journey?

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

To answer this question I used the SQL(right frame)

Results below..

Query Results		
lt_attr.utm_source	lt_attr.utm_campaign	COUNT(*)
email	weekly-newsletter	115
facebook	retargeting-ad	113
email	retargeting-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 (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)  
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),  
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 Journey?

- The typical journey for the user is evenly balanced between the first touches. The source/campaigns: medium (interview-with-cool-tshirts-founder), nytimes(getting-to-know-cool-tshirts), and buzzfeed(ten-crazy-cool-tshirts-facts).
- The typical last touches the users made were from the source/campaign: email (weekly-newsletter), facebook (reargeting-ad), email(retargeting-campaign), and nytimes(getting-to-know-cool-tshirts).
- The last touches that resulted into a purchase is reflected. The source/campaigns that resulted in the highest last touches purchased are: email(weekly-newsletter) and facebook (retargeting-Ad)

Query Results		
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

Query Results		
lt_attr.utm_source	lt_attr.utm_campaign	COUNT(*)
email	weekly-newsletter	447
facebook	retargeting-ad	443
email	retargeting-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

Query Results		
lt_attr.utm_source	lt_attr.utm_campaign	COUNT(*)
email	weekly-newsletter	115
facebook	retargeting-ad	113
email	retargeting-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

3. Optimize The Campaign Budget

What 5 campaigns should CoolTshirts re-invest in and why?

- CoolTShirts should re-invest in the 5 campaigns that led to a purchase. CoolTShirts still needs a first impression campaign that leads to a last touch and eventual purchase. I would reinvest in the top 2 first touch campaigns (“interview-with-cool-tshirts-founder” and “getting-to-know-cool-tshirts”). Since I’m only allowed to pick 5 campaigns I choose the top 2 from the first touches.
- My last 3 campaigns I would choose to re-invest are the last touches that led to a purchase (“weekly-newsletter”, “retargeting-ad”, and “retargeting-campaign”).

The End

Thank You