

# First- and Last-Touch Attribution with CoolTShirts.com

Learn SQL from scratch

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August 2018

# 1. Getting to know the company

# 1 - Get familiar with the company

## a) Campaigns & Sources

- UTM parameters are often used to attribute traffic to their source (where the traffic came from e.g. facebook), the medium (what type of traffic it was e.g. social) and campaign name (what the campaign is called e.g. weekly-newsletter)
- Using the query outlined on the right, we can see that there are 8 unique campaigns in the database which have been recorded against 6 unique traffic sources. We can see this by looking at the utm\_campaign and utm\_source columns.
- In general, there was only 1 campaign recorded per source with the exception of 'google' and 'email' which both have 2 campaigns each.

```
1 SELECT COUNT(DISTINCT utm_campaign) AS  
   'unique_campaigns',  
2 COUNT(DISTINCT utm_source) AS 'unique_sources'  
3 FROM page_visits;  
4  
5 SELECT DISTINCT utm_campaign, utm_source  
6 FROM page_visits  
7 GROUP BY utm_campaign  
8 ORDER BY utm_source;
```

Query Results	
unique_campaigns	unique_sources
8	6
utm_campaign	utm_source
ten-crazy-cool-tshirts-facts	buzzfeed
retargetting-campaign	email
weekly-newsletter	email
retargetting-ad	facebook
cool-tshirts-search	google
paid-search	google
interview-with-cool-tshirts-founder	medium
getting-to-know-cool-tshirts	nytimes

# 1 - Get familiar with the company

## b) Website Pages

- Visitors from the 8 campaigns visited 4 pages which are outlined below:
  - landing\_page
  - shopping\_cart
  - checkout
  - purchase

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

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

## 2. What is the user journey?

## 2 - What is the user journey?

### a) First Touch

- The majority of users first touch is coming from the interview-with-cool-tshirts-founder campaign through the utm\_source medium.
- The 2nd highest is from nytimes from the campaign getting-to-know-cool-tshirts.
- Of all first touches source and campaigns, the 2 above are responsible for 62.4% of all first touches.

```
13 WITH first_touch AS (  
14     SELECT user_id,  
15         MIN(timestamp) as first_touch_at  
16     FROM page_visits  
17     GROUP BY user_id),  
18 ft_attr AS (  
19     SELECT ft.user_id, ft.first_touch_at,  
20         pv.utm_source, pv.utm_campaign  
21     FROM first_touch ft  
22     JOIN page_visits pv  
23     ON ft.user_id = pv.user_id  
24     AND ft.first_touch_at = pv.timestamp  
25     )  
26     SELECT ft_attr.utm_source,  
27         ft_attr.utm_campaign, COUNT (*)  
28     FROM ft_attr  
29     GROUP BY utm_campaign  
30     ORDER BY COUNT(*) desc;
```

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

## 2 - What is the user journey?

### b) Last Touch

- As you can see, there are a higher number of campaigns which were last touches than first touches.
- With that being said, the email weekly-newsletter is the most common last touch combination, with facebook retargetting-ad as the 2nd.
  - It is interesting to note that the email retargetting is not doing as well as the weekly-newsletter.
- The lowest last touch campaign is the cool-tshirts-search from the google source.

```
30 WITH last_touch AS (  
31     SELECT user_id,  
32         MAX(timestamp) as last_touch_at  
33     FROM page_visits  
34     GROUP BY user_id),  
35 lt_attr AS (  
36     SELECT lt.user_id, lt.last_touch_at,  
37         pv.utm_source, pv.utm_campaign  
38     FROM last_touch lt  
39     JOIN page_visits pv  
40     ON lt.user_id = pv.user_id  
41     AND lt.last_touch_at = pv.timestamp  
42 )  
42 SELECT lt_attr.utm_source,  
43     lt_attr.utm_campaign, COUNT (*)  
44 FROM lt_attr  
45 GROUP BY utm_campaign  
46 ORDER BY COUNT(*) desc;
```

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

## 2 - What is the user journey?

### c) Visitors who purchased

- In total, there were 361 unique purchases.
- This is calculated by looking for distinct user\_ids which visited the purchase page.

```
49     SELECT COUNT(DISTINCT(user_id)) as  
      'unique_purchases'  
50     FROM page_visits  
51     WHERE page_name = '4 - purchase';  
52  
53     SELECT COUNT(user_id) as 'purchases'  
54     FROM page_visits  
55     WHERE page_name = '4 - purchase';  
56
```

unique_purchases
361
purchases
361



## 2 - What is the user journey?

### d) Last touches on purchase page

- Of the 361 unique purchases, 31.9% of them came from the weekly-newsletter campaign.
  - When compiling the data, I looked at both unique and all user\_ids which went to purchase which returned the same figures, showing users who purchased only did so once.
- When reviewing the last touches on the table, the weekly-newsletter and retargeting-ad has by far the largest share of users who have purchased.
- Strictly when looking at last touch alone, users are not purchasing when coming from the interview-with-cool-tshirts-founder or cool-tshirts-search campaigns.

```
57 SELECT utm_campaign, COUNT(DISTINCT(user_id)) as
    unique_users, MAX(timestamp) as last_touch_at
58 FROM page_visits
59 WHERE page_name = '4 - purchase'
60 GROUP BY utm_campaign
61 ORDER BY 2 desc;
62
63 SELECT utm_campaign, COUNT(user_id) as users,
    MAX(timestamp) as last_touch_at
64 FROM page_visits
65 WHERE page_name = '4 - purchase'
66 GROUP BY utm_campaign
67 ORDER BY 2 desc;
```

utm_campaign	unique_users	last_touch_at
weekly-newsletter	115	2018-02-04 11:09:47
retargeting-ad	113	2018-02-03 05:29:01
retargeting-campaign	54	2018-02-03 19:11:12
paid-search	52	2018-02-04 00:17:45
getting-to-know-cool-tshirts	9	2018-01-28 15:30:07
ten-crazy-cool-tshirts-facts	9	2018-01-31 00:23:24
interview-with-cool-tshirts-founder	7	2018-01-20 17:18:05
cool-tshirts-search	2	2018-01-18 00:25:00

utm_campaign	users	last_touch_at
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ten-crazy-cool-tshirts-facts	9	2018-01-31 00:23:24
interview-with-cool-tshirts-founder	7	2018-01-20 17:18:05
cool-tshirts-search	2	2018-01-18 00:25:00

## 2 - What is the user journey?

### e) Typical user journey

- The typical path to purchase is where people have come via the interview-with-cool-tshirts-founder campaign and have come back via retargeting-ad or weekly-newsletter.
- When reviewing this table, we can see that the majority of users are touching the site multiple times before purchase which is usual for ecommerce sites.
- It is interesting to note that the last touch campaigns (before purchase) are typically not used as a first touch and therefore a multi campaign approach will be important moving forwards.

first_touch_campaign	last_touch_campaign	COUNT(*)
interview-with-cool-tshirts-founder	retargeting-ad	38
interview-with-cool-tshirts-founder	weekly-newsletter	37
getting-to-know-cool-tshirts	retargeting-ad	35
ten-crazy-cool-tshirts-facts	weekly-newsletter	35
ten-crazy-cool-tshirts-facts	retargeting-ad	34
getting-to-know-cool-tshirts	weekly-newsletter	29
interview-with-cool-tshirts-founder	paid-search	19
getting-to-know-cool-tshirts	retargeting-campaign	17
interview-with-cool-tshirts-founder	retargeting-campaign	17
ten-crazy-cool-tshirts-facts	paid-search	16
cool-tshirts-search	weekly-newsletter	13
ten-crazy-cool-tshirts-facts	retargeting-campaign	13
getting-to-know-cool-tshirts	paid-search	12
getting-to-know-cool-tshirts	getting-to-know-cool-tshirts	8
ten-crazy-cool-tshirts-facts	ten-crazy-cool-tshirts-facts	8
interview-with-cool-tshirts-founder	interview-with-cool-tshirts-founder	7
cool-tshirts-search	retargeting-campaign	6
cool-tshirts-search	paid-search	5
cool-tshirts-search	retargeting-ad	5
cool-tshirts-search	cool-tshirts-search	2
getting-to-know-cool-tshirts	ten-crazy-cool-tshirts-facts	1
ten-crazy-cool-tshirts-facts	getting-to-know-cool-tshirts	1

### 3. Optimise the campaign budget

### 3 - Optimise the campaign budget

#### a) Top 5 campaigns to reinvest in

- The multi-campaign approach appears to be the correct approach as users are coming to the site multiple times before purchasing. With this in mind, the top 5 campaigns to invest in are:
  - **interview-with-cool-tshirts-founder:** This is the most used first touch point for the majority of users who eventually purchased. It is important to invest in campaigns which start people in the funnel.
  - **retargeting-ad:** This is the 2nd most used last touch campaigns for users who go on to the purchase page. This twinned with the first touch campaign above is the most used path to purchase.
  - **weekly-newsletter:** This is the top last touch campaign where users went on to purchase. This should therefore be invested in.
  - **getting-to-know-cool-tshirts:** This is the 2nd highest first touch campaign and is the 3rd most common purchase path with the retargeting-ad as the last touch campaign.
  - **retargeting-campaign:** When looking at reinvesting, ensuring you have campaigns which convert is important and therefore having the 3rd highest last touch campaign is something to retest with other first touch campaigns.

Thank You.