



# First and Last Touch Attributions

'Learn SQL from Scratch'  
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# Getting Familiar with CoolTShirts

## How many campaigns and sources does CoolTShirts use and how are they related?

CoolTShirts has **8** distinct UTM campaigns and **6** distinct UTM sources.

The difference is that the UTM campaigns are specific types of campaigns (such as re-targeting ads or newsletters), while UTM source is the website/platform on which the campaign is run or displayed (such as New York Times or Google).

```
1 SELECT COUNT (DISTINCT utm_campaign) FROM
  page_visits;
2 SELECT COUNT (DISTINCT utm_source) FROM
  page_visits;
3 SELECT DISTINCT utm_campaign, utm_source
  FROM page_visits;
```

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

## What pages are on their website?

The four pages on the CoolTShirts website are:

1. Landing Page
2. Shopping Cart
3. Checkout Page
4. Purchase Page

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

```
4  SELECT DISTINCT page_name FROM  
    page_visits;
```

---

# What is the User Journey?

## How many first touches is each campaign responsible for?

- The “interview with cool tshirts founder” is clearly the leading campaign with 622 first touches.
- The “getting to know cool tshirts” is also quite a popular campaign, with 612 first touches.
- “Ten crazy cool tshirts facts” garnered 576 first touches.
- “Cool tshirts” search on google lead to 169 first touches.

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

```
7 WITH first_touch AS (  
8     SELECT user_id,  
9           MIN(timestamp) as first_touch_at  
10    FROM page_visits  
11    GROUP BY user_id),  
12 ft_attr AS (  
13     SELECT ft.user_id,  
14           ft.first_touch_at,  
15           pv.utm_source,  
16           pv.utm_campaign  
17    FROM first_touch ft  
18    JOIN page_visits pv  
19      ON ft.user_id = pv.user_id  
20      AND ft.first_touch_at = pv.timestamp)  
21     SELECT ft_attr.utm_source,  
22           ft_attr.utm_campaign,  
23           COUNT(*)  
24    FROM ft_attr  
25   GROUP BY 1, 2  
26  ORDER BY 3 DESC;
```

## How many last touches is each campaign responsible for?

- Weekly newsletter is the most common last touch campaign, with 447 visits.
- The retargeting ad on Facebook is close behind, with 443 last touches.
- See table below for the number of last touches for the other six campaigns. Google searches received the lowest number of last touch visits.

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

```
28 WITH last_touch AS (SELECT user_id,
29     MAX(timestamp) as last_touch_at
30     FROM page_visits
31     GROUP BY user_id),
32 lt_attr AS (SELECT lt.user_id,
33     lt.last_touch_at,
34     pv.utm_source,
35     pv.utm_campaign,
36     pv.page_name
37     FROM last_touch lt
38     JOIN page_visits pv
39     ON lt.user_id = pv.user_id
40     AND lt.last_touch_at = pv.timestamp)
41 SELECT lt_attr.utm_source,
42     lt_attr.utm_campaign,
43     COUNT(*)
44 FROM lt_attr
45 GROUP BY 1, 2
46 ORDER BY 3 DESC;
```



## How many visitors make a purchase?



361 visitors purchased a Tshirt, as indicated by the query below.

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

COUNT (user_id)
361

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

- See table below for the results. Interestingly, 52 out of the 178 google paid search last touches were on the purchase page. Even though paid search may be less common last touch, nearly 30% of the users visiting via that campaign, end up purchasing an item.

lt_attr.utm_source	lt_attr.utm_campaign	COUNT(*)
email	weekly-newsletter	114
facebook	retargeting-ad	112
email	retargeting-campaign	53
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

```
51 WITH last_touch AS (SELECT user_id,
52                        MAX(timestamp) as last_touch_at
53 FROM page_visits
54 GROUP BY user_id),
55 lt_attr AS (SELECT lt.user_id,
56                  lt.last_touch_at,
57                  pv.utm_source,
58                  pv.utm_campaign,
59                  pv.page_name
60 FROM last_touch lt
61 JOIN page_visits pv
62   ON lt.user_id = pv.user_id
63   AND lt.last_touch_at = pv.timestamp)
64 SELECT lt_attr.utm_source,
65        lt_attr.utm_campaign,
66        COUNT(*)
67 FROM lt_attr
68 WHERE page_name = '4 - purchase'
69 GROUP BY 1, 2
70 ORDER BY 3 DESC;
```

## What is the typical user journey?

- Nearly 2000 users visit the CoolTShirts site

```
82 SELECT COUNT (DISTINCT user_id) FROM  
page_visits;
```

COUNT (DISTINCT user\_id)

1979

- Most users find and visit CoolTShirts website after reading/engaging with the interview of the company's founder on Medium. The second largest group of visitors is sourced through the New York Times article/campaign (see first touch slide).

```
84 SELECT COUNT(DISTINCT user_id) FROM  
page_visits WHERE page_name = '3 -  
checkout';
```

COUNT(DISTINCT user\_id)

1881

- ~1880 of the 1979 visitors make it to the shopping cart page. The users that found the site through the NYT article have the most visits to the cart.

```
72 SELECT COUNT (DISTINCT user_id),  
utm_campaign, utm_source FROM page_visits  
73 WHERE page_name = '2 - shopping_cart'  
74 GROUP BY utm_campaign  
75 ORDER BY 1 DESC;
```

COUNT (DISTINCT user_id)	utm_campaign	utm_source
680	getting-to-know-cool-tshirts	nytimes
566	ten-crazy-cool-tshirts-facts	buzzfeed
515	interview-with-cool-tshirts-found	medium
133	cool-tshirts-search	google

## What is the typical user journey (continued) ?

- 1431 visitors make it to checkout. Most of those visitors come from the weekly newsletter emails and retargeting ads on Facebook.

```
84 SELECT COUNT(DISTINCT user_id) FROM
    page_visits WHERE page_name = '3 -
    checkout';
```

COUNT(DISTINCT user_id)
1431

```
77 SELECT COUNT (DISTINCT user_id),
    utm_campaign, utm_source FROM page_visits
78 WHERE page_name = '3 - checkout'
79 GROUP BY utm_campaign
80 ORDER BY 1 DESC;
```

COUNT (DISTINCT user_id)	utm_campaign	utm_source
450	weekly-newsletter	email
445	retargeting-ad	facebook
246	retargeting-campaign	email
179	paid-search	google
41	getting-to-know-cool-tshirts	nytimes
32	ten-crazy-cool-tshirts-facts	buzzfeed
31	interview-with-cool-tshirts-found	medium
7	cool-tshirts-search	google

- Out of nearly 2000 visitors to the site, 361 make it to the purchase page. The majority of these purchasers did NOT come from the Medium and NYT, rather they came mostly through email, retargeting ads and google searches (see slide 10).

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# Optimizing the Campaign Budget

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



Out of the 8 campaigns, CoolTShirts can reinvest in only 5. To choose which campaigns will optimize their budget, they must pay attention to both first and last touches. It is important to consider how customers find their site, and it's also important to see how many of those customers are retained, and move through to the customer journey to the purchasing stage. That being said, CoolTShirts should invest in the following 5 campaigns:

1. **Buzzfeed article** - was both first touch point/shopping cart, and also all the way through to purchase
2. **NYT Article** - popular first touch point and made it all the way to checkout point.
3. **Weekly newsletter email** - touchpoint for both checkout and purchase
4. **Paid search** - touchpoint for both checkout and purchase
5. **FB retargeting** - touchpoint for both checkout and purchase