

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

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# ***CoolTShirts.com***

*CoolTShirts, an innovative apparel shop, is running a few marketing campaigns to increase website visits and purchases. Using UTM parameters and touch attribution queries, I can track their user journey from initial visit to purchase. To help optimize their marketing campaigns, I will be compiling query results and explaining which sources and campaigns help CoolTShirts user outreach and overall online presence. I will also be giving my suggestions on which specific campaigns they need to re-invest in to help grow their business.*

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# 1. Get familiar with CoolTShirts

To answer this first series of questions, I will be writing queries using *UTM parameters* that will help track the visits to the CoolTShirts website. The questions are:

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

1.2) What pages are on the CoolTShirts website?

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

```
1 SELECT COUNT (DISTINCT utm_campaign) AS 'Count of
   Campaigns'
2 FROM page_visits;
3 SELECT COUNT (DISTINCT utm_source) AS 'Count of
   Sources'
4 FROM page_visits;
5 SELECT DISTINCT utm_campaign AS 'Campaign',
6 utm_source AS 'Source'
7 FROM page_visits;
```

- A *utm\_source* identifies which touchpoint that sent the traffic. In this case, we have six different sources (nytimes, email, buzzfeed, facebook, medium and google). These sources use a *campaign* in order to attract the user to visit the CoolTShirts website.
- A *utm\_campaign* identifies a specific ad or email blast that directs the user to the website. In this case, there are eight total campaigns that are used to draw the user to CoolTShirts website.

Query Results	
Count of Campaigns	
8	
Count of Sources	
6	
Campaign	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



## 1.2) What pages are on the CoolTShirts website?

*A page\_name is the title of the section of the page that was visited.*

- The *Page Names* shown in the query results are the titles of each section of the CoolTShirts website.
- *1-landing\_page* is distinct page in which the campaign has directed the user.
- *2-shopping\_cart* is the distinct page that shows what item(s) the user intends to be purchased.
- *3-checkout* is the distinct page that sums the total price of the item(s) to be purchased.
- *4-purchase* is the distinct page that provides the confirmation of item(s) paid.

```
7  SELECT DISTINCT page_name AS 'Page Names'
8  FROM page_visits;
```

Query Results
Page Names
1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase

## 2. What is the user journey?

To answer this second series of questions, I will be writing queries using *first- and last- touch attributions* that will track the user journey. The questions are:

2.1) How many first touches is each campaign responsible for?

2.2) How many last touches is each campaign responsible for?

2.3) How many visitors makes a purchase?

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

2.5) What is the typical user journey?

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

First-touch attribution only considers the first `utm_source` and `utm_campaign` for each user. This is a good way of knowing how visitors initially discovered the CoolTShirts website.

```
1 WITH first_touch AS (  
2   SELECT user_id,  
3   MIN(timestamp) AS first_touch_at  
4   FROM page_visits  
5   GROUP BY user_id),  
6 ft_attr AS (  
7   SELECT ft.user_id, ft.first_touch_at,  
8   pv.utm_source, pv.utm_campaign  
9   FROM first_touch ft  
10  JOIN page_visits pv  
11  ON ft.user_id = pv.user_id  
12  AND ft.first_touch_at = pv.timestamp)  
13 SELECT ft_attr.utm_source AS 'Source',  
14        ft_attr.utm_campaign AS 'Campaign',  
15        COUNT(*) AS 'Count'  
16 FROM ft_attr  
17 GROUP BY 1, 2  
18 ORDER BY 3 DESC;
```

Query Results		
Source	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

- By including `MIN(timestamp)` in the query, the results show which specific `utm_source` and `utm_campaign` initially prompted the user to the CoolTShirts website.
- The results show that only *four* out of the *six* total sources were responsible for the first touch, meaning only *four* out of the *eight* total campaigns were responsible.
- The most effective campaigns were the “interview-with-cool-tshirts-founder”, “getting-to-know-cool-tshirts”, and “ten-crazy-cool-tshirts-facts”.



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

*Last-touch attribution only considers the last `utm_source` and `utm_campaign` for each user. This is a good way of knowing how visitors are drawn back to the CoolTShirts website, especially for making a final purchase.*

```
1  WITH last_touch AS (  
2    SELECT user_id,  
3           MAX(timestamp) AS last_touch_at  
4    FROM page_visits  
5    GROUP BY user_id),  
6  lt_attr AS (  
7    SELECT lt.user_id, lt.last_touch_at, pv.utm_source,  
8           pv.utm_campaign  
9    FROM last_touch lt  
10   JOIN page_visits pv  
11   ON lt.user_id = pv.user_id  
12   AND lt.last_touch_at = pv.timestamp)  
13  SELECT lt_attr.utm_source AS 'Source',  
14         lt_attr.utm_campaign AS 'Campaign',  
15         COUNT(*) AS 'Count'  
16  FROM lt_attr  
17  GROUP BY 1, 2  
18  ORDER BY 3 DESC;
```

Query Results		
Source	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

- By including `MAX(timestamp)` in the query, the results show which specific `utm_source` and `utm_campaign` is responsible for each users last visit.
- The results show that all sources and all campaigns were responsible for each users last touch.
- The most effective campaigns were “weekly-newsletter”, “retargetting-ad”, and “retargetting-campaign”.
- The campaigns “weekly-newsletter” and “retargetting campaign” were emails sent to users who already visited CoolTShirts and prompted them to revisit the website. Same with the facebook campaign “retargetting-ad”; this campaign was presented to users on facebook, so that they would return to the CoolTShirts website.

## 2.3) How many visitors make a purchase?

- By counting the distinct *user\_id* and including a 'Where' clause for the specific page '4 – purchase', the query results show how many users had made purchases on the CoolTShirts website.
- Only 361 users out of 1,979 total users who visited CoolTShirts had made purchases. *(The bottom query is to show the total count of distinct users who visited the website)*

```
1  SELECT COUNT (DISTINCT user_id) AS 'Users that made  
   Purchases'  
2  FROM page_visits  
3  WHERE page_name = '4 - purchase';
```

Query Results	
Users that made Purchases	
361	

```
1  SELECT COUNT (DISTINCT user_id) AS 'Total Users'  
2  FROM page_visits;
```

Query Results	
Total Users	
1979	

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

```
1 WITH last_touch AS (  
2   SELECT user_id,  
3   MAX(timestamp) AS last_touch_at  
4   FROM page_visits  
5   WHERE page_name = '4 - purchase'  
6   GROUP BY user_id),  
7 lt_attr AS (  
8   SELECT lt.user_id, lt.last_touch_at, pv.utm_source,  
9   pv.utm_campaign  
10  FROM last_touch lt  
11  JOIN page_visits pv  
12  ON lt.user_id = pv.user_id  
13  AND lt.last_touch_at = pv.timestamp)  
14 SELECT lt_attr.utm_source AS 'Source',  
15        lt_attr.utm_campaign AS 'Campaign',  
16        COUNT(*) AS 'Count'  
17 FROM lt_attr  
18 GROUP BY 1, 2  
19 ORDER BY 3 DESC;
```

Query Results		
Source	Campaign	Count
email	weekly-newsletter	115
facebook	retargetting-ad	113
email	retargetting-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

- By including a 'Where' clause for the specific '4 – purchase' page in the *last-touch* query, the results help identify which specific *source* and *campaign* were most successful in leading to user purchase.
- The results show that the three retargetting campaigns from the facebook and email sources had the highest count of users who made purchases.

## 2.5) What is the typical user journey?

The typical customer journey is from the initial visit to purchase

```
1 SELECT COUNT(DISTINCT user_id) AS 'User Count - Landing_Page'
2 FROM page_visits
3 WHERE page_name = '1 - landing_page';
```

Query Results
User Count - Landing_Page
1979

```
1 SELECT COUNT(DISTINCT user_id) AS 'User Count - Shopping_Cart'
2 FROM page_visits
3 WHERE page_name = '2 - shopping_cart';
```

Query Results
User Count - Shopping_Cart
1881

```
1 SELECT COUNT(DISTINCT user_id) AS 'User Count - Checkout'
2 FROM page_visits
3 WHERE page_name = '3 - checkout';
```

Query Results
User Count - Checkout
1431

```
1 SELECT COUNT(DISTINCT user_id) AS 'User Count - Purchase'
2 FROM page_visits
3 WHERE page_name = '4 - purchase';
```

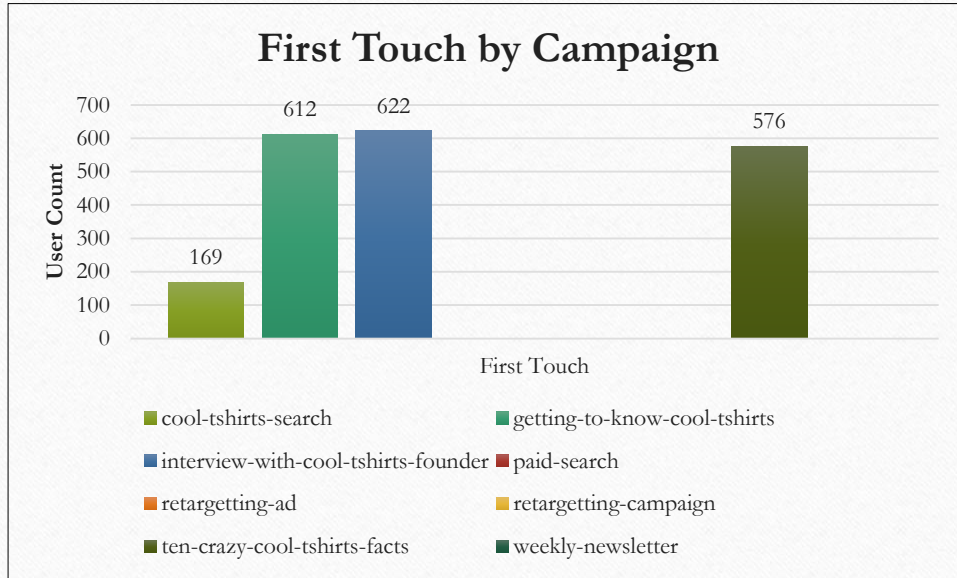
Query Results
User Count - Purchase
361

As the query results show, the count of users decreases from visiting the website on the landing\_page to making a purchase on the purchase page. In the following slides, I will be utilizing the results from my *UTM parameters* and *first- and last- touch attributions* to show in graph form which campaigns prompted the most users to initially visit the website as well as the campaigns that brought back the users for a final purchase.



## 2.5) What is the typical user journey?

*The beginning of the user journey starts with how the user discovers the CoolTShirts website.*

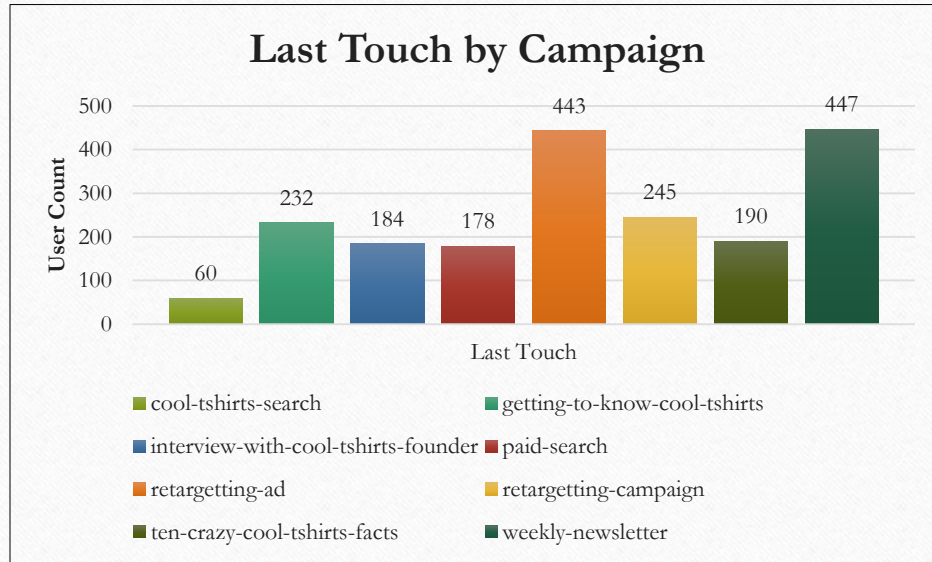


- Based off previous query results, the *First Touch by Campaign* chart displays how many users that each campaign had prompted them to the CoolTShirts website.
- As explained in earlier slides, only four out of the eight total campaigns were responsible for the initial visit to the website.
- Typically, the user discovers the website by either the “interview-with-cool-tshirts-founder” campaign, the “getting-to-know-cool-tshirts” campaign, or the “ten-crazy-cool-tshirts-facts” campaign. These three campaigns make up 1,810 users of the total 1,979 users visiting the website.
- The lowest user count is from the “cool-tshirts-search” campaign, which only makes up 169 users.



## 2.5) What is the typical user journey? (Cont'd)

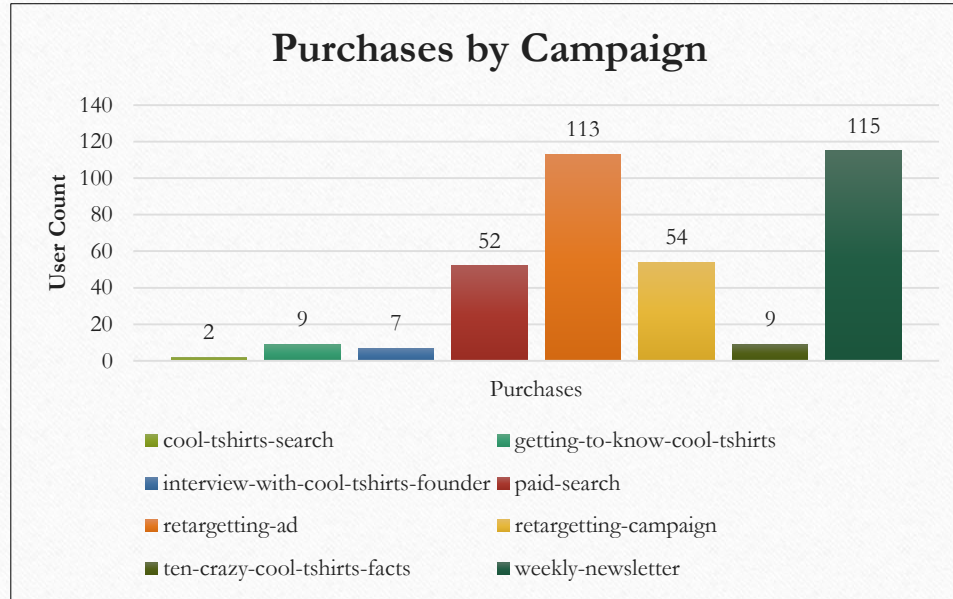
*The last touch is the record of the final visit from the user.*



- Based off previous query results, the *Last Touch by Campaign* chart displays how many users that each campaign is responsible for their last visit on the CoolTShirts website.
- As explained in earlier slides, all campaigns were responsible for the last touch visit.
- Typically, the users last visit on the website is prompted by the “ten-crazy-cool-tshirts-facts” campaign, the “retargeting-ad” campaign, the “retargeting-campaign”, or the “getting-to-know-cool-tshirts” campaign. These four campaigns make up 1,367 users out of the total 1,979 users who visit the website.

## 2.5) What is the typical user journey? (Cont'd)

*At the end of the user journey is the purchasing of items.*



- Based off previous query results, the *Purchases by Campaign* chart displays how many users that each campaign is responsible for leading them to their purchases on CoolTShirts website.
- As explained in earlier slides, all campaigns were responsible for purchased items.
- Typically, the user who was directed to the website from either the “weekly newsletter” campaign or the “retargeting-ad” campaign had purchased items. These two re-targeting campaigns are responsible for 228 users out of 361 total users who purchased items.

### 3. Optimize the campaign budget

Now that I have presented the *attribution* queries and their results, I will conclude by providing my suggestions to improve CoolTShirts marketing campaign in order to drive more user purchases.

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

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

	Source	Campaign	User First Touch Count	User Last Touch Count	User Purchases Count
1	medium	interview-with-cool-tshirts-founder	622	184	7
2	nytimes	getting-to-know-cool-tshirts	612	232	9
3	buzzfeed	ten-crazy-cool-tshirts-facts	576	190	9
4	email	weekly-newsletter	-	447	115
5	facebook	retargetting-ad	-	443	113

#### My Suggestions

- CoolTShirts needs to re-invest in (1) “interview-with-cool-tshirts-founder” campaign, (2) “getting-to-know-cool-tshirts” campaign and (3) “ten-crazy-cool-tshirts-facts” campaign because they each generate the high count of user visits. Even though the three campaigns did not drive a high count of user purchases, they did bring in a lot of website traffic. By having high initial user traffic, CoolTShirts has more potential in gaining returning users by sending retargetting campaigns.
- CoolTShirts also needs to re-invest in (4) “weekly-newsletter” campaign and (5) “retargetting-ad” campaign because they drive a high count of user visits as well as a high count of user purchases. These retargetting campaigns are extremely important because their sources (facebook and email) reach a higher amount of user audience with the potential of a final purchase. Also, with facebook as a social media outlet, retargetting ads are easily available to share with friends, which helps grow the online presence.



## Extra results worth mentioning

```
1 SELECT user_id, page_name, timestamp, utm_campaign
2 FROM page_visits
3 WHERE user_id = '29180';
4
5 SELECT user_id, page_name, timestamp, utm_campaign
6 FROM page_visits
7 WHERE user_id = '76466';
8
9 SELECT user_id, page_name, timestamp, utm_campaign
10 FROM page_visits
11 WHERE user_id = '94852';
```

user_id	page_name	timestamp	utm_campaign
29180	1 - landing_page	1/10/2018 0:29	getting-to-know-cool-tshirts
29180	2 - shopping_cart	1/10/2018 2:43	getting-to-know-cool-tshirts
29180	3 - checkout	1/12/2018 16:22	retargetting-campaign
29180	4 - purchase	1/12/2018 16:36	retargetting-campaign
29180	1 - landing_page	1/28/2018 13:20	getting-to-know-cool-tshirts
29180	2 - shopping_cart	1/28/2018 13:45	getting-to-know-cool-tshirts

user_id	page_name	timestamp	utm_campaign
76466	1 - landing_page	1/9/2018 1:33	ten-crazy-cool-tshirts-facts
76466	2 - shopping_cart	1/9/2018 6:28	ten-crazy-cool-tshirts-facts
76466	3 - checkout	1/10/2018 15:35	weekly-newsletter
76466	4 - purchase	1/10/2018 15:39	weekly-newsletter
76466	1 - landing_page	1/12/2018 22:02	interview-with-cool-tshirts-founder
76466	2 - shopping_cart	1/12/2018 22:08	interview-with-cool-tshirts-founder

user_id	page_name	timestamp	utm_campaign
94852	1 - landing_page	1/9/2018 2:41	ten-crazy-cool-tshirts-facts
94852	2 - shopping_cart	1/9/2018 3:10	ten-crazy-cool-tshirts-facts
94852	3 - checkout	1/13/2018 8:57	retargetting-ad
94852	4 - purchase	1/13/2018 9:07	retargetting-ad
94852	1 - landing_page	1/27/2018 2:35	getting-to-know-cool-tshirts
94852	2 - shopping_cart	1/27/2018 7:19	getting-to-know-cool-tshirts

While running my last- touch queries, I noticed that the user count had a discrepancy by a count of 3 users when filtering by purchases. By digging a little deeper, I noticed that 3 users had returned to the website after they had already made purchases. With that said, the “getting-to-know-cool-tshirts” campaign and the “interview-with-cool-tshirts-founder” (which are two out of the three campaigns that I suggested to re-invest) were responsible for bringing back returning users who have already purchased items.



A row of t-shirts in various colors (white, black, grey, pink, yellow, orange, light blue, green, dark blue, black, and mustard yellow) hanging on wooden hangers. The shirts are slightly wrinkled and hang closely together.

**END** 😊