



# First-and Last Touch Attribution with CoolTShirts.com

Learn SQL from Scratch  
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# Overview

This powerpoint will present the finding of CoolTShirts.com and how the customer's journey from the initial visit to purchase. Throughout this powerpoint we will answer the question below.

1. Get familiar with the company.
2. What is the user journey.
3. Optimize the campaign budget

# 1. Get familiar with the company

- 1.1. How many campaigns and sources does CoolTShirts use and how are they related? Be sure to explain the difference between `utm_campaign` and `utm_source`.
- 1.2. What pages are on their website?



## 1.1 How many campaigns and sources does CoolTShirts use and how are they related? Be sure to explain the difference between `utm_campaign` and `utm_source`.

- Campaign Count 8 Source Count 6
- **`Umt_campaign`** identifies the specific ad or email blast. It uses different kind of methods for communicating with their market to reinforce their position and for customer acquisition. As you can see more campaigns are going on then sources. Campaigns are targeted methods and are specific to many different demographics.
- **`Utm_source`** identifies which site sent the traffic. These are different places where campaigns are run. In this case you can see many web based sources were used to run campaigns. Many different campaigns can be used on the same source depending on the market research provided.

Query Results	
Campaign Count	
8	
Source Count	
6	
Campaigns	Sources
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

### SQL Work

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



## 1.2 What pages are on their website?

- The 4 distinct pages are featured on the right in the query results.
- This is not to say the website does not have more because each page has multiple subsets within it. Using the Select Distinct function we were able to get to the 4 main pages that connect the entire website.

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

### SQL Work

```
1 SELECT DISTINCT page_name AS 'Page Names'
2 From page_visits;
```



## 2. What is the user Journey

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 make a purchase?

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

2.5 What is a typical journey?



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

- First touch allows CoolTShirts to know which channels and campaign are working. This will help decide for future campaigns which route will provide the best return.
- 4 of the 6 (66.7%) sources used and 4 of the 8 (50%) campaigns returned results.
- In this case the most successful campaigns were [interview-with-cool-tshirts-founder](#) on [medium](#). The second from the [Ny Times](#) [getting-to-know-cool-shirts](#) was second most successful

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

### SQL Work

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



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

- Last touch is responsible for the customers last visit to the site.
- The campaign that yielded the most results was the email campaign at 447. This accounted for 22.6% of the last touches.

Query Results

Source	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

## SQL Work

```
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  ft_attr AS (  
7      SELECT lt.user_id,  
8             lt.last_touch_at,  
9             pv.utm_source,  
10            pv.utm_campaign  
11     FROM last_touch lt  
12     JOIN page_visits pv  
13     ON lt.user_id = pv.user_id  
14     AND lt.last_touch_at = pv.timestamp  
15  )  
16  SELECT ft_attr.utm_source AS Source,  
17         ft_attr.utm_campaign AS Campaign,  
18         COUNT(*) AS COUNT  
19  FROM ft_attr  
20  GROUP BY 1, 2  
21  ORDER BY 3 DESC;
```





## 2.3 How many visitors make a purchase?

- Using the Distinct function again this allows us to see how many unique customers purchased. The number of t-shirts sold could be much higher.
- 361 customers who purchased out of the first touch 1,979 Results in a 18.2% rate of success.

Query Results
Customers that Purchase
361

### SQL Work

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



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

- Email and Facebook were by far the best overall sources to launch campaigns on leading to a combined 78% of the last touches on the purchase page.
- The most producing campaign was weekly-newsletter with 115 last touches that led to purchases 31.9% of all campaigns.

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

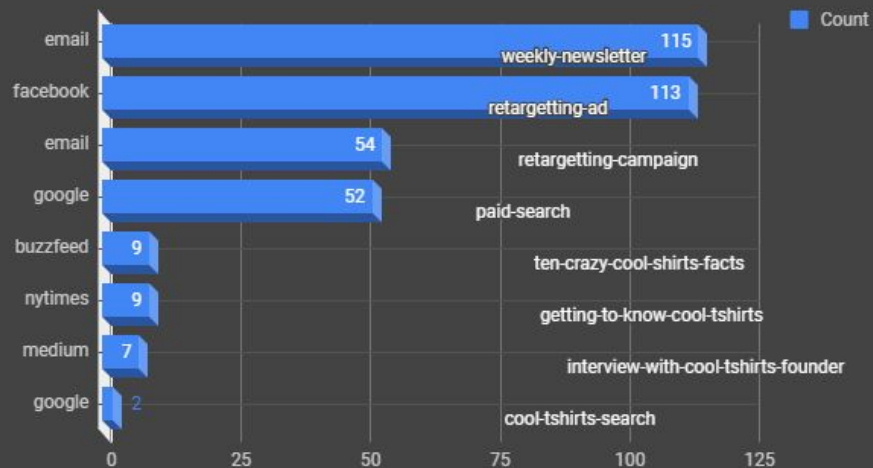
### SQL Work

```
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 ft_attr AS (  
8     SELECT lt.user_id,  
9         lt.last_touch_at,  
10        pv.utm_source,  
11        pv.utm_campaign  
12     FROM last_touch lt  
13     Join page_visits pv  
14         ON lt.user_id = pv.user_id  
15         AND lt.last_touch_at = pv.timestamp)  
16 SELECT ft_attr.utm_source AS Source,  
17        ft_attr.utm_campaign AS Campaign,  
18        COUNT(*) AS COUNT  
19 FROM ft_attr  
20 GROUP BY 1, 2  
21 ORDER BY 3 DESC;
```

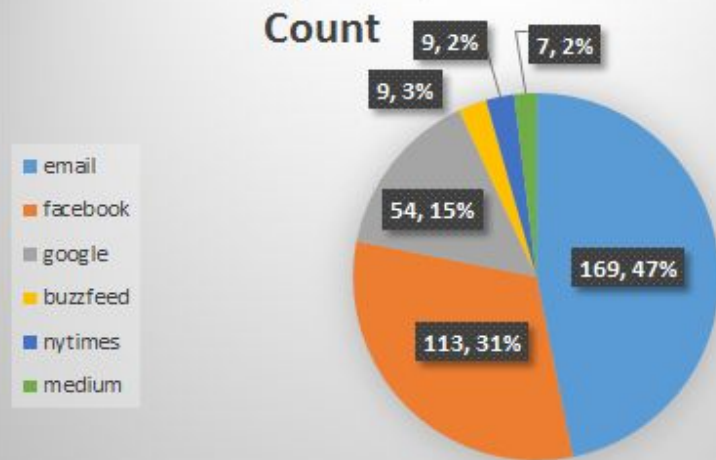


## 2.4 continued..Graphs

Last Touch on Purchase Page




Last Touch Response per Source



## 2.5 What is a typical journey?

The Typical Journey through the campaigns have shown that first touches do not necessarily mean sales. However, this does not mean that the campaigns were not successful. In fact it produced many first touches which shows that it successfully is reaching a new customer base. From the data presented below you can see that the campaigns that resulted in the least amount of first touches yielded the most successful campaigns. This shows that those campaigns were not targeting acquiring new members, however, focusing on the existing customer base.





# 3. Optimize the campaign budget

3.1 CoolTShirts can reinvest in 5 campaigns. Which should they pick and why?

## 3.1 CoolTShirts can reinvest in 5 campaigns. Which should they pick and why?

- My approach to reinvestment in campaigns would be the ones that yield the best results. Those with higher purchases by retargeting their existing customers outperformed the new customer acquisition campaigns. With email and Facebook being 78% of the overall source of sales, I would focus on the retargeting existing customer base (highlighted yellow) that those sources already target. This is because they are cheap and very targeted ways of advertisement. The last two I would focus on were the getting-to-know-cool-tshirts and interview-with-cool-tshirt-founder because they yielded the most first touches and can increase brand awareness. It also will increase customer acquisition over time.

Campaign	First Touches	First Touches %	Last Touches	Last Touches %	Purchases	Purchases %
weekly-newsletter	0	0.0%	447	22.6%	115	31.9%
retargeting-ad	0	0.0%	443	22.4%	113	31.3%
retargeting-campaign	0	0.0%	245	12.4%	54	15.0%
paid-search	0	0.0%	178	9.0%	52	14.4%
ten-crazy-cool-shirts-facts	576	29.1%	190	9.6%	9	2.5%
getting-to-know-cool-tshirts	612	30.9%	232	11.7%	9	2.5%
interview-with-cool-tshirts-founder	622	31.4%	184	9.3%	7	1.9%
cool-tshirts-search	169	8.5%	60	3.0%	2	0.6%
Total	1979	100.0%	1979	100.0%	361	100.0%

