



First- and Last- Touch Attribution with CoolTShirts.com

Learn SQL from Scratch

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Table of Contents

1) Get familiar with the company

- How many campaigns and sources does COOLTShirts use and how they relate? What it's the difference between a **campaign** and a **source**?
- What pages **exist** on their website?

2) What is the user journey?

- How many first touches is each campaign responsible for?
- How many last touches is each campaign responsible for?
- How many visitors make a purchase?
- How many last touches *on the purchase page* is each campaign responsible for?
- What is the typical user journey?

3) Optimize the campaign budget

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

1. Getting familiar with the company

1) Get familiar with the company

- How many campaigns and sources does COOLTShirts use and how they relate? What it's the difference between a **campaign** and a **source**?

Number of Campaigns	Number of Sources
8	6

- Source: This is the place people are coming from. It captures the source of your traffic and is usually the website on which you shared the link, but can be also an email.
- Campaign: This is a method for companies to promote their message to different target groups, in order to convert into buyers.
- Sources and campaigns are closely related. A source can run multiple campaigns, and also a campaign could be run on multiple sources. Keep in mind that in order to access a campaign you need first to enter the source.

Campaigns	Sources
Getting to know cool t-shirts	nytimes
Weekly newsletter	email
Ten crazy cool t-shirts facts	buzzfeed
Retargeting-campaign	email
Retargeting ad	facebook
Interview with cool t-shirts founder	Medium
Paid-search	Google
Cool t-shirts search	Google

```
--1a. Number of distinct campaigns
SELECT COUNT (DISTINCT utm_campaign) AS 'Number of Campaigns'
FROM page_visits;
```

```
--1b. Number of distinct sources
SELECT COUNT (DISTINCT utm_source) AS 'Number of Sources'
FROM page_visits;
```

```
--1c. Campaigns assigned to each source
SELECT DISTINCT utm_campaign AS 'Campaign', utm_source AS 'Source'
FROM page_visits;
```

```
--1d. Pages listed on CoolTShirts website
SELECT DISTINCT page_name AS 'Page Names'
FROM page_visits;
```

- What pages exist on their website?

Page Name
1. Landing Page
2. Shopping Cart
3. Check Out
4. Purchase

2. What is the User Journey

- How many first touches is each campaign responsible for?

It is important to state that in order to get the first touches for each campaign we need to identify the very first time that each user “entered” our site. Using the **minimum** value of **timestamps** we are able to do so.

Campaigns	Count
Interview with cool t-shirts founder	622
Getting to know cool t-shirts	612
Ten crazy cool t-shirts facts	576
Cool t-shirts search	169

```
--3.First touches per campaign
WITH first_touch AS (
    SELECT user_id,
           MIN(timestamp) AS first_touch_camp
    FROM page_visits
    GROUP BY user_id),
ft_cp AS (
    SELECT ft.user_id,
           ft.first_touch_camp,
           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_camp = pv.timestamp
)
--Count first touches per campaign
SELECT ft_cp.utm_campaign AS Campaign, COUNT(*) AS
COUNT
FROM ft_cp
GROUP BY 1
ORDER BY 2 DESC;
```

2. What is the User Journey-Continued

- How many last touches is each campaign responsible for?

It is important to state that in order to get the last touches for each campaign we need to identify the last time that each user “entered” our site. Using the **maximum** value of **timestamps** we are able to do so.

Campaigns	Count
Weekly newsletter	447
Retargeting ad	443
Retargeting campaign	245
Getting to know cool t-shirts	232
Ten crazy cool t-shirts facts	190
Interview with cool t-shirts founder	184
Paid search	178
Cool t-shirts search	60

- How many visitors make a purchase?

Out of the 1979 unique visitors, 361 proceed to make a purchase, i.e approximately the 18% (361/1979) of them convert from visitors to buyers.

Visitors that purchase
361

```
--4.Last touches per campaign
WITH last_touch AS (
    SELECT user_id,
           MAX(timestamp) AS last_touch_camp
    FROM page_visits

    GROUP BY user_id),

lt_cp AS (
    SELECT lt.user_id,
           lt.last_touch_camp,
           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_camp = pv.timestamp
)
--Count last touches per campaign
SELECT lt_cp.utm_campaign AS Campaign, COUNT(*)
AS COUNT
FROM lt_cp
GROUP BY 1
ORDER BY 2 DESC;
```

```
--5.Unique Visitors who convert to Buyers
SELECT COUNT (DISTINCT user_id) AS 'VISITORS WHO
PURCHASE'
FROM page_visits
WHERE page_name = '4 - purchase';
```

2. What is the User Journey-Continued

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

Here, we need also to calculate the last touches for each campaign as we did before, but except that we also use the corresponding page name which includes purchases, so as to identify the campaigns that led to the completion of buying cycle, i.e the purchase.

Campaigns	Count
Weekly newsletter	115
Retargetting ad	113
Retargetting campaign	54
Paid search	52
Getting to know cool t-shirts	9
Ten crazy cool t-shirts facts	9
Interview with cool t-shirts founder	7
Cool t-shirts search	2

```
--6.Last touches per campaign that led to a purchase
WITH last_touch AS (
    SELECT user_id,
           MAX(timestamp) AS last_touch_camp
    FROM page_visits
    -- selecting the page that includes the purchases
    WHERE page_name = '4 - purchase'
    GROUP BY user_id),
lt_cp AS (
    SELECT lt.user_id,
           lt.last_touch_camp,
           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_camp = pv.timestamp
)
--Count last touches per campaign
SELECT lt_cp.utm_campaign AS Campaign, COUNT(*) AS
COUNT
FROM lt_cp
GROUP BY 1
ORDER BY 2 DESC;
```

2. What is the User Journey-Continued

- What is the typical user journey?

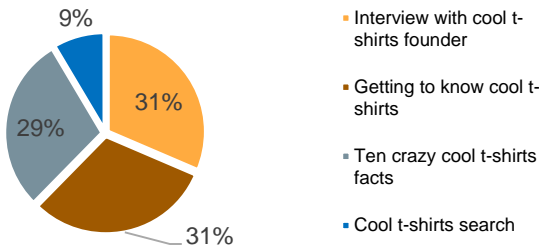
A user's typical journey to acquire a good from a website can be depicted through the following funnel:

1. Enter the site
2. Browse the products
3. Add to the shopping cart
4. Proceed to checkout

However, in our case since there are no data for products, such as product pages, we will focus on three aspects:

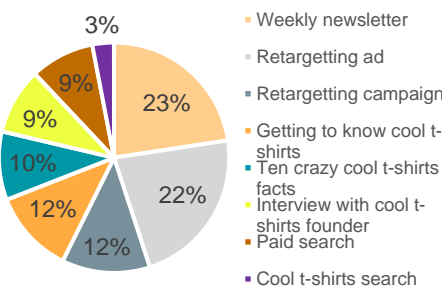
1. First touches by Campaign
2. Last touches by Campaign
3. Purchases by Campaign

First touches by Campaign



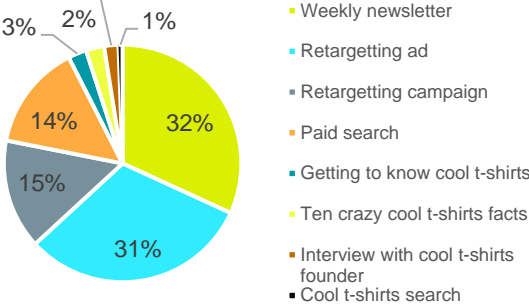
- As we can see more than 60% comes from two campaigns, whereas the top 3 account for over 90% of the “trigger” that attracts customers attention .

Last touches by Campaign



- From the graph we can derive that the last touches are focused on the top 3 campaigns, which are focused on re-capturing users attention as we expected.

Purchases by Campaign



- Again, as we can see over the 75% of purchases are assigned to activities which target to increase customers retention rate, so they keep visiting our site for a potential purchase.

3.Optimize the campaign budget

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

- Weekly Newsletter comes first both for the last touches, either on the Purchase page or on another one. It shows that our customers evaluate highly the content of our newsletter. However, we can further improve its content by personilazing it as much as possible.
- Retargeting Ad and Retargeting Campaign demonstrate a similar performance as Weekly Newsletter. However, Retargeting Campaign does not seem to be as much successful as Retargeting Ad, since there is a sudden drop of users between the ad and the campaign. Probably, keeping only the ad, deploying it on additional sites where First Touches are successful such as NY Times, Buzzfeed e.t.c, and investing the money to some other marketing methods, can be more profitable.
- The highlighted Campaigns from First Touches should be continued, since as we have already demonstrated before they generate more than 90% of first visits to COOLTShirts site.

Campaigns	% First Touches
Interview with cool t-shirts founder	31%
Getting to know cool t-shirts	31%
Ten crazy cool t-shirts facts	29%
Cool t-shirts search	9%

Campaigns	% Last Touches
Weekly newsletter	23%
Retargeting ad	22%
Retargeting campaign	12%
Getting to know cool t-shirts	12%
Ten crazy cool t-shirts facts	10%
Interview with cool t-shirts founder	9%
Paid search	9%
Cool t-shirts search	3%

Campaigns	% Purchase
Weekly newsletter	32%
Retargeting ad	31%
Retargeting campaign	15%
Paid search	14%
Getting to know cool t-shirts	2%
Ten crazy cool t-shirts facts	2%
Interview with cool t-shirts founder	2%
Cool t-shirts search	1%

Room for Improvement:

- Organic Search (Cool t-shirts search) brings a very small percentage of users for their first visit at our site. Probably, because COOLTShirts is still not that famous, or probably due to a highly competitive business environment, it should not be continued as a marketing method.
- Paid Search will be discontinued. Despite bringing an important number of purchasers, using better “words” and targeting audiences that are looking for a product like this can increase our “visitors-to-customers” conversion rate.