



# CoolTShirts Attribution

Learn SQL from Scratch

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# 1. Get Familiar with CoolTShirts

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

There are **eight** campaigns targeting **six** sources driving traffic to **four** CoolTShirts pages.

- Two campaigns target users via Google search
- Two campaigns target users via media outlets: NY Times & BuzzFeed
- One campaign targets users via weekly newsletters
- One campaign targets users via medium
- Two campaigns re-target users via Facebook and email

```
SELECT COUNT (DISTINCT utm_campaign)
FROM page_visits;
```

```
SELECT COUNT (DISTINCT utm_source)
FROM page_visits;
```

```
SELECT DISTINCT utm_campaign, utm_source
FROM page_visits;
```

Sources (6)	Campaigns (8)
nytimes	getting-to-know-cool-shirts
buzzfeed	ten-crazy-cool-tshirts-facts
facebook	retargeting-ad
email	weekly-newsletter
email	retargeting-campaign
medium	Interview-with-cool-tshirts-founder
google	paid-search
google	cool-tshirts-search

## 1.2 What is the difference between `utm_campaign` and `utm_source`?

### **Utm\_source:**

Identifies which site sent the traffic (i.e., google, newsletter, or facebook\_ad)

### **Utm\_campaign:**

Identifies the specific ad or email blast (i.e., weekly-newsletter or retargeting-ad)

## 1.3 What pages are on their website?

CoolTShirts has four pages:

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

PAGE NAME
1 – landing_page
2 – shopping_cart
3 – checkout
4 – purchase

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

## 2. What is the User Journey

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

Not all campaigns have first touches since some campaigns are retargeting (hitting users that have already visited the site or signed up for newsletters).

- Four of the eight campaigns had first touches.
- Interview-with-cool-tshirts-founder (medium) had the most first touches.
- Campaigns that used media outlet sources (NY Times & BuzzFeed) had the most combined first touches.
- Cool-tshirts-search (Google) accounted for the least amount of first touches.

CAMPAIGN	SOURCE	FIRST TOUCHES
interview-with-cool-tshirts-founder	medium	622
getting-to-know-cool-shirts	nytimes	612
ten-crazy-cool-tshirts-facts	buzzfeed	576
cool-tshirts-search	google	169

```
WITH first_touch AS (  
    SELECT user_id,  
           MIN(timestamp) as 'first_touch_at'  
    FROM page_visits  
    GROUP BY user_id),  
ft_attr AS (  
    SELECT ft.user_id,  
           ft.first_touch_at,  
           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_at = pv.timestamp)  
SELECT ft_attr.utm_source,  
       ft_attr.utm_campaign,  
       COUNT(*)  
FROM ft_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```



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

The weekly-newsletter (email) and retargeting-ad (Facebook) campaigns made up nearly half of all last touches. Retargeting-campaign (email) and getting-to-know-cool-tshirts (NY Times) fell into the second tier of last touches (200+). Ten-crazy-cool-tshirts-facts (Buzzfeed), interview-with cool-tshirts-founder (medium) and paid-search (Google) constituted the third tier (100+ last touches). Cool-tshirts-search (Google) had the fewest last touches.

CAMPAIGN	SOURCE	LAST TOUCHES
weekly-newsletter	email	447
retargeting-ad	facebook	443
retargeting-campaign	email	245
getting-to-know-cool-tshirts	nytimes	232
ten-crazy-cool-tshirts-facts	buzzfeed	190
interview-with-cool-tshirts-founder	medium	184
paid-search	google	178
cool-tshirts-search	google	60

```
WITH last_touch AS (  
    SELECT user_id,  
           MAX(timestamp) as 'last_touch_at'  
    FROM page_visits  
    GROUP BY user_id),  
lt_attr AS (  
    SELECT lt.user_id,  
           lt.last_touch_at,  
           pv.utm_source,  
           pv.utm_campaign,  
           pv.page_name  
    FROM last_touch lt  
    JOIN page_visits pv  
      ON lt.user_id = pv.user_id  
      AND lt.last_touch_at = pv.timestamp  
    )  
SELECT lt_attr.utm_source,  
       lt_attr.utm_campaign,  
       COUNT(*)  
FROM lt_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

## 2.3 How many visitors made a purchase?

361 of 1,979 visitors ended up purchasing – a conversion rate of 18%.

VISITORS	VISTORS THAT PURCHASED	CONVERSION RATE
1,979	361	18%

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

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

Of the 361 last touches on the purchase page, the majority were driven by four campaigns:

- weekly-newsletter (115)
- retargeting-ad (113)
- retargeting-campaign (54)
- paid-search (52)

```
WITH last_touch AS (  
  SELECT utm_campaign, user_id,  
         MAX(timestamp) AS last_touch_at  
  FROM page_visits  
  WHERE page_name = '4 - purchase'  
  GROUP BY user_id)  
SELECT utm_campaign, COUNT(*)  
FROM last_touch  
GROUP BY utm_campaign;
```

CAMPAIGN	LAST TOUCH ON PURCHASE PAGE
weekly-newsletter	115
retargeting-ad	113
retargeting-campaign	54
paid-search	52
getting-to-know-cool-tshirts	9
ten-crazy-cool-tshirts-facts	9
interview-with-cool-tshirts-founder	7
cool-tshirts-search	2

## 2.5 What is the typical user journey?

Using the top campaign and source for every step of the journey:

- Most visitors came to CoolTShirts.com via the **interview-with-cooltshirts-founder** campaign and **Medium** source (622).
- Most visitors had their last touch via the **weekly-newsletter** campaign via **email** (447).
- Most visitors who had their last touch via the weekly-newsletter also accounted for the most last touches on the purchase page (115).

More users were brought to CoolTShirts.com from the Interview with CoolTShirts Founder campaign – were retargeted by the Weekly Newsletter campaign, which was the same campaign responsible for the most purchases.

### 3. Optimize the Campaign Budget

## 3.1 Which 5 campaigns should CoolTShirts re-invest in?

1. **interview-with-cool-tshirts-founder**. Responsible for the most first touches, which is essentially visitors first contact with CoolTShirts (CTS). Without this hook, CTS loses its top vehicle for retargeting.
2. **getting-to-know-cool-shirts**. Second-most first touches and fourth-most last touches leading to nearly a 40% first/last touch percentage. While this campaign fell below the paid search campaign in terms of purchases, it's vital to getting users into the funnel where retargeting conversions happen.
3. **weekly-newsletter**. This (email) campaign drives the most last touch visits AND the most purchases.
4. **retargeting-ad**. Second to the weekly newsletter campaign in terms of last touch visits and purchases. This hits users on another channel (Facebook).
5. **paid-search**. Has the second-lowest amount of last touches (178) but the fourth-most last touch purchases and the highest last touch to last touch purchase rate of 29%.

CAMPAIGN	SOURCE	FIRST TOUCHES	LAST TOUCHES	PURCHASES	CONVERSION RATE
interview-with-cool-tshirts-founder	medium	622	184	7	29.5%
getting-to-know-cool-shirts	nytimes	612	232	9	39.9%
weekly-newsletter	email	NULL	447	115	25.7%
retargeting-ad	facebook	NULL	443	113	25.5%
paid-search	google	NULL	178	52	29%