



# Attribution Queries

Capstone Project | Learn SQL from Scratch

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# 1. Get Familiar With CoolTShirts

# Get Familiar with CoolTShirts

CoolTShirts (CTS) is running 8 campaigns to drive traffic to its website.

We can attribute CTS traffic to these 8 campaigns:

- *BuzzFeed* article (“Ten Crazy Cool TShirts Facts”)
- The *Cool TShirts Digest* (the company’s weekly email newsletter)
- Email blast (retargeting previous customers)
- Facebook ad (retargeting users that liked CTS)
- Paid search for Google results
- Google searches for “Cool Tshirts”
- *Medium* article (“Interview with the Cool TShirts Founder”)
- *New York Times* column (“Getting to Know Cool TShirts”)

COUNT (DISTINCT utm_campaign)
8

utm_campaign
ten-crazy-cool-tshirts-facts
weekly-newsletter
retargeting-campaign
retargeting-ad
paid-search
cool-tshirts-search
interview-with-cool-tshirts-founder
getting-to-know-cool-tshirts

```
/*
GET FAMILIAR SECTION
*/

/*
Count of distinct campaigns
*/

SELECT COUNT (DISTINCT utm_campaign)
FROM page_visits;

/*
COUNT of distinct sources
*/

SELECT COUNT (DISTINCT utm_source)
FROM page_visits;

/*
How are campaign and source related
*/

SELECT DISTINCT utm_campaign, utm_source
FROM page_visits
ORDER BY 2;
```

# Get Familiar with CoolTShirts

CoolTShirts traffic is coming from 6 sources.

The 6 sources, or touchpoints, that are bringing traffic to the Cool TShirts website, include:

- *Facebook*
- *Medium*
- *New York Times* (nyt.com)
- Google searches
- *BuzzFeed*
- Emails

COUNT (DISTINCT utm_source)
6

utm_source
buzzfeed
email
email
facebook
google
google
medium
nytimes

```
/*  
GET FAMILIAR SECTION  
*/  
  
/*  
Count of distinct campaigns  
*/  
  
SELECT COUNT (DISTINCT utm_campaign)  
FROM page_visits;  
  
/*  
COUNT of distinct sources  
*/  
SELECT COUNT (DISTINCT utm_source)  
FROM page_visits;  
  
/*  
How are campaign and source related  
*/  
  
SELECT DISTINCT utm_campaign, utm_source  
FROM page_visits  
ORDER BY 2;
```

# Get Familiar with CoolTShirts

There are 4 pages on the CoolTShirts website.

- Landing page (page 1)
- Shopping cart (page 2)
- Checkout (page 3)
- Purchase (page 4)

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

```
/*  
GET FAMILIAR SECTION  
*/  
  
/*  
What pages are on the CTS website  
*/  
  
SELECT DISTINCT page_name  
FROM page_visits;
```

## 2. What is the User Journey?

# What is the User Journey?

## First Touches by Campaign

- We can attribute 622 first touch visits to the Cool TShirts (CTS) website to the 'interview with the founder' article on *Medium*.
- The *New York Times* article is responsible for 612 first touch visits.
- We can attribute 576 first touch visits to the "Ten Crazy Cool TShirts Facts" article on *BuzzFeed*.
- Google searches for "cool tshirts" are responsible for 169 first touch visits to the CTS website.

ft_info.utm_source	ft_info.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

```
/*
USER JOURNEY SECTION
*/

/*
How many first touches per campaign and source
Modify the first touch query
*/

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



# What is the User Journey?

## Last Touches by Campaign

- The *Cool TShirts Digest* email newsletter is responsible for 447 last touch visits to the Cool TShirts website.
- The Facebook ad is responsible for 443 last touch visits.
- We can attribute 245 visits to the retargeting email blast.
- The article in the *New York Times* is responsible for 232 last touch visits.
- The *BuzzFeed* article is responsible for 190 last touch visits.
- We can attribute 184 last touch visits to the 'interview with the founder' post on *Medium*.
- The two Google search campaigns are responsible for 238 last touch visits (178 – paid search, 60 – “cool tshirts”).

lt_info.utm_source	lt_info.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

```
/*
USER JOURNEY SECTION
*/

/*
How many last touches per campaign and source
*/

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

# What is the User Journey?

## Visitors Making Purchases

Purchases were made by 361 unique customers.

We know a user made a purchase if they made it from the checkout page to the purchase page, so we looked for the count of users making it to the purchase page.

COUNT (DISTINCT user_id)
361

```
/*  
USER JOURNEY SECTION  
*/  
  
/*  
Count of distinct visitors making a purchase  
*/  
  
SELECT COUNT (DISTINCT user_id)  
FROM page_visits  
WHERE page_name = '4 - purchase';
```

# What is the User Journey?

## Last Touches on the Purchase page by Campaign

The *Cool TShirts Digest* email newsletter and the retargeting ad running on Facebook are responsible for the most last touch visits that led to purchases.

The next most significant campaigns are the retargeting email blast, and paid search on Google.

lt_info.utm_source	lt_info.utm_campaign	COUNT(*)
email	weekly-newsletter	115
facebook	retargeting-ad	113
email	retargeting-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

```
/*
USER JOURNEY SECTION
*/

/*
How many last touches per campaign and source
*/

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

# What is the User Journey?

## Typical User Journey

From analyzing the first- and last-touch attribution results, it seems the typical user journey starts with either:

- the 'interview with the Cool TShirts founder' post on *Medium*,
- the 'getting to know Cool TShirts' article in the *New York Times*, or
- the 'ten crazy CoolTShirts facts' article on *BuzzFeed*.

It seems that the user journey typically ends with either:

- the *CoolTShirts Digest* weekly email newsletter,
- the retargeting ad running on Facebook, or
- the retargeting email blast.

By analyzing last touch visits to the purchase page, it is clear that those channels should be recognized when Cool TShirts determines their marketing campaign optimization strategy.

## First Touch Top 3

ft_info.utm_source	ft_info.utm_campaign	COUNT(*)
medium	interview-with-cool-tshirts-founder	622
nytimes	getting-to-know-cool-tshirts	612
buzzfeed	ten-crazy-cool-tshirts-facts	576

## Last Touch Top 3

lt_info.utm_source	lt_info.utm_campaign	COUNT(*)
email	weekly-newsletter	447
facebook	retargeting-ad	443
email	retargeting-campaign	245

## Last Touch Purchases Top 3

lt_info.utm_source	lt_info.utm_campaign	COUNT(*)
email	weekly-newsletter	115
facebook	retargeting-ad	113
email	retargeting-campaign	54

### 3. Optimize the Campaign Budget

# Optimize the Campaign Budget

## Campaign Reinvestment Recommendations

Based on the first touch and last touch visit analysis, we feel that Cool TShirts should renew investment in the following 5 campaigns:

- *Cool TShirts Digest* email newsletter
- Facebook retargeting ad
- Retargeting email blast
- Google paid search
- *New York Times* articles

First Touches by Campaign

ft_info.utm_source	ft_info.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

Last Touches to Purchase

lt_info.utm_source	lt_info.utm_campaign	COUNT(*)
email	weekly-newsletter	115
facebook	retargeting-ad	113
email	retargeting-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