

CoolTShirts Marketing Attribution

Analyze Data with SQL

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1. Get familiar with CoolTShirts

CoolTShirts, an innovative apparel shop, is running a bunch of marketing campaigns.

The aim of the project is to help them answer these questions about their campaigns:

1. Get familiar with the company.
 - 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`.
 - What pages are on their website?

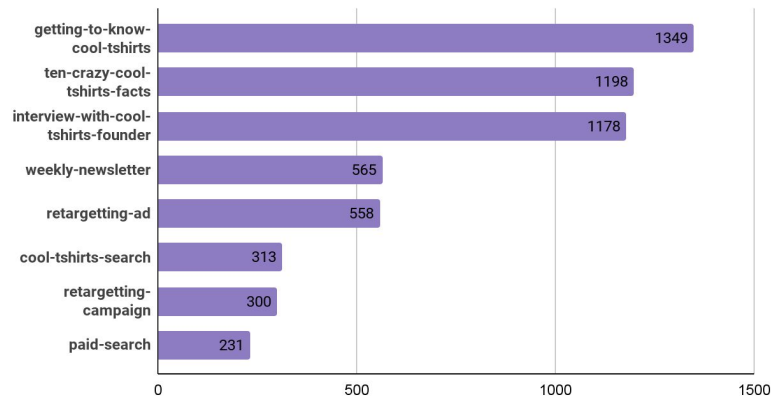
utm_campaign - Identifies the specific ad or email blast (e.g. retargeting-ad or weekly-newsletter)

Total campaigns

COUNT(DISTINCT utm_campaign)

8

Campaign Totals



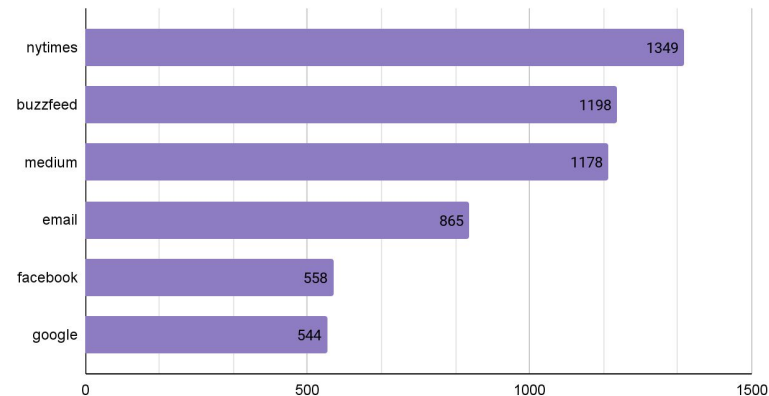
utm_source - Identifies which touchpoint sent the traffic (e.g. google, email, or facebook)

Total Sources

COUNT(DISTINCT utm_source)

6

Source Totals



Relationship between Source and Campaign

utm_campaign	utm_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

Pages on CoolTshirts website

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

From the above queries we now have the following info:

- There are 8 campaigns in total currently being run
- There are 6 sources in total
- The companies website has a total of 4 pages for the user to access

2. What is the user journey?

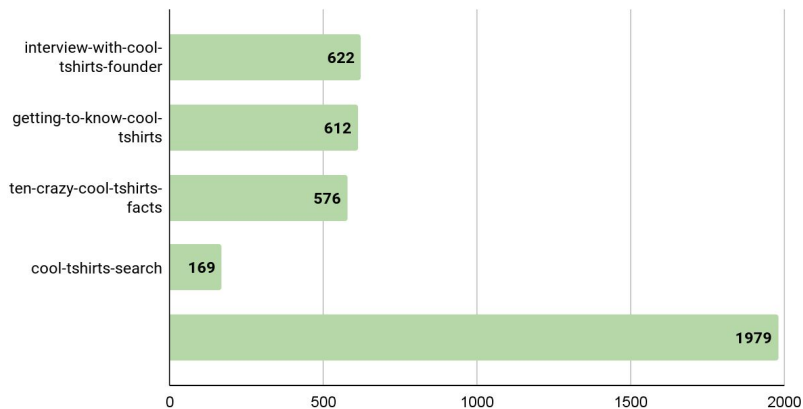
2. What is the user journey?

- 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?

First Touch per campaign

utm_source	utm_campaign	Total campaign
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

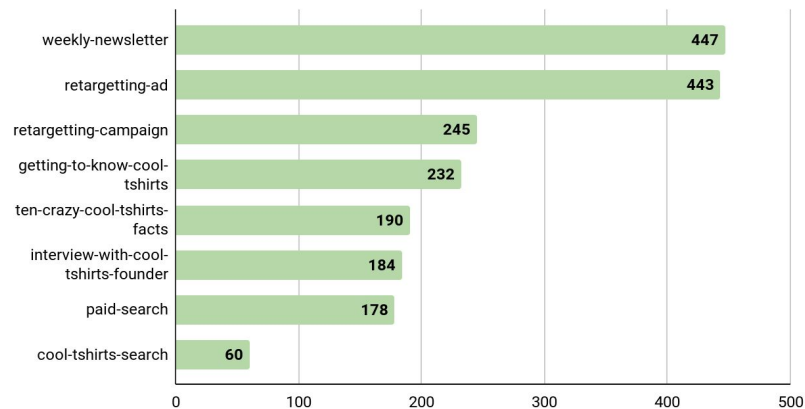
First touch campaigns



Last touch per campaign

utm_source	utm_campaign	Total campaign
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

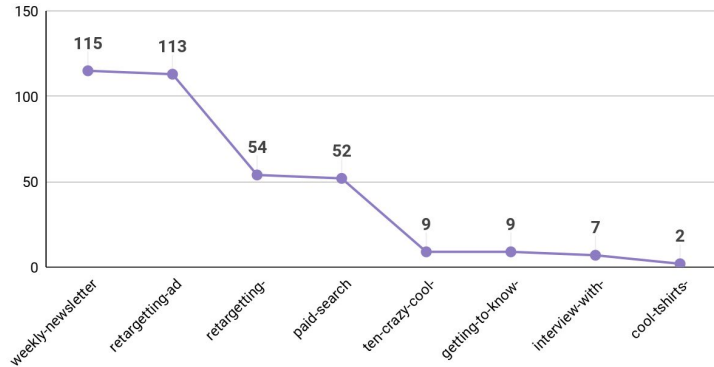
Last touch campaigns



Total purchase made

page_name	COUNT(DISTINCT user_id)
4 - purchase	361

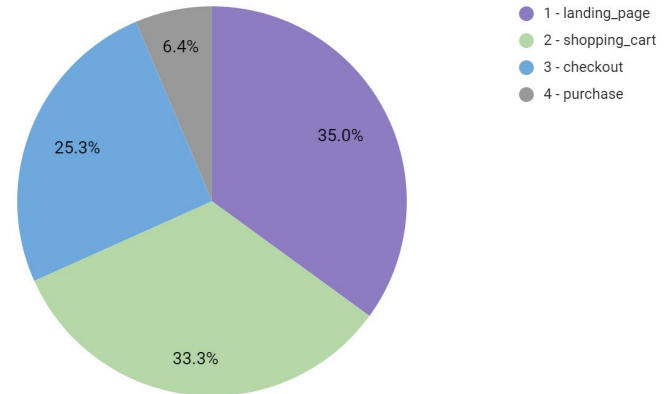
Last touches on purchase page per campaign



Total hits per page - User Journey

page_name	COUNT(DISTINCT user_id)
1 - landing_page	1979
2 - shopping_cart	1881
3 - checkout	1431
4 - purchase	361

Total hits per page



3. Optimize the campaign budget

3. Optimize the campaign budget.

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

- **weekly-newsletter** - Had the most amount of purchases (32%) or 115 of the 361 purchases made, it also had the highest amount of last touches, although it did not receive any first touches its value is definitely there.
- **retargeting-ad** - Had 2nd highest (31%) or 113 of 361 purchases as well as 2nd highest last touches, also did not receive any first touches but just as valuable
- **retargeting_campaign** - Even though it did not have a very high amount of actual campaigns and no first touches, it still placed third for purchases (15%) and last touches
- **ten_crazy_cool_tshirt_facts** - Although it had 2nd highest campaign amounts it only placed 5th for purchases (2%) and 4th for last touches but it had 2nd highest first touch rate (32%) which means it still has value because it helps get people to the site initially
- **interview-with-cool-tshirts-founder** - placing 7th for purchases and 6th for last touch it surprisingly places 1st for 1st touch, meaning once again that it opens the door for new customers and would be wise to keep

4. Methods

Campaigns breakdown totals

```
SELECT utm_campaign, COUNT(utm_campaign)
FROM page_visits
GROUP BY utm_campaign;
```

Total campaigns

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

Relationship between Source and Campaign

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

Sources breakdown Totals

```
SELECT utm_source, COUNT(utm_source)
FROM page_visits
GROUP BY utm_source;
```

Total Sources

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

Pages on CoolTshirts website

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

First Touch per campaign

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

Total purchases made per campaign

```
WITH last_touch AS (  
    SELECT user_id,  
           MAX(timestamp) as last_touch_at  
    FROM page_visits  
    WHERE page_name = '4 - purchase'  
    GROUP BY user_id)  
SELECT page_name,  
       pv.utm_source,  
       pv.utm_campaign,  
       COUNT(pv.utm_campaign) AS 'Total campaign'  
FROM last_touch lt  
JOIN page_visits pv  
ON lt.user_id = pv.user_id  
   AND lt.last_touch_at = pv.timestamp  
GROUP BY 3  
ORDER BY 4 DESC;
```

Last Touch per campaign

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

Total hits per page - User Journey

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

Total purchase made

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