



Attribution Queries

Analyze Data with SQL

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10/01/2022

Introduction

CoolTShirts, an innovative apparel shop, is running a bunch of marketing campaigns. In this project, the aim is to help them by 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?
- What pages are 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?

The company CoolTShirts is imaginary and the database is in Codecademy.

Get familiar with CoolTShirts

- **UTM source** answers the question “Where is the traffic coming from to the website?”
- **UTM campaign** answers the question “Why is the traffic coming to the website?”
- There are 8 different campaigns set in 6 different sources in the data table.
- There are four different page names :
 1. landing_page
 2. shopping_cart
 3. checkout
 4. purchase

utm_campaign	utm_source
getting-to-know-cool-tshirts	nytimes
weekly-newsletter	email
ten-crazy-cool-tshirts-facts	buzzfeed
retargeting-campaign	email
retargeting-ad	facebook
interview-with-cool-tshirts-founder	medium
paid-search	google
cool-tshirts-search	google

```
/* in order to see the coloumn names from the table */

SELECT *
FROM page_visits
LIMIT 10;

/* number of campaigns and sources CoolTShirts are used */

SELECT COUNT(DISTINCT utm_campaign) AS number_of_campaigns
FROM page_visits ;

SELECT COUNT(DISTINCT utm_source) AS number_of_sources
FROM page_visits;

/* Relation of sources and campaigns */

SELECT DISTINCT utm_campaign, utm_source
FROM page_visits ;

/* distinct values of page_name column */

SELECT DISTINCT page_name
FROM page_visits;
```

About the User Journey

- It is visible that interview with cool t-shirts founder campaign brings the most traffic to the website for the first time.
- The campaign that makes people to last touch is weekly newsletter.

utm_campaign	number_of_first_touches
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

utm_campaign	number_of_last_touches
weekly-newsletter	447
retargeting-ad	443
retargeting-campaign	245
getting-to-know-cool-tshirts	232
ten-crazy-cool-tshirts-facts	190
interview-with-cool-tshirts-founder	184
paid-search	178
cool-tshirts-search	60

```
/* number of first touches that each campaign is responsible for */
```

```
SELECT utm_campaign, COUNT(first_touch) AS  
number_of_first_touches  
FROM (SELECT MIN(timestamp) AS  
first_touch,user_id, utm_campaign  
FROM page_visits  
GROUP BY user_id)  
GROUP BY utm_campaign  
ORDER BY 2 DESC;
```

```
/* number of last touches that each campaign is responsible for */
```

```
SELECT utm_campaign, COUNT(last_touch) AS  
number_of_last_touches  
FROM (SELECT MAX(timestamp) AS last_touch,  
user_id, utm_campaign  
FROM page_visits  
GROUP BY user_id)  
GROUP BY utm_campaign  
ORDER BY 2 DESC ;
```

About the User Journey

- Number of visitors who make a purchase is 361.
- Number of last touch from weekly newsletter is 447. Only 114 of them make a purchase. The other users who make a purchase come from retargeting ad, retargeting campaign and paid search.

number_of_visitors	page_name
361	4 - purchase

number_of_last_touches	utm_campaign	page_name
114	weekly-newsletter	4 - purchase
112	retargeting-ad	4 - purchase
53	retargeting-campaign	4 - purchase
52	paid-search	4 - purchase
9	ten-crazy-cool-tshirts-facts	4 - purchase
9	getting-to-know-cool-tshirts	4 - purchase
7	interview-with-cool-tshirts-founder	4 - purchase
2	cool-tshirts-search	4 - purchase

```
/* number of distinct users make a purchase */
```

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

```
/* number of last touches on the purchase page that each  
campaign responsible for */
```

```
SELECT COUNT(last_touch) AS number_of_last_touches,  
utm_campaign,page_name  
FROM (SELECT MAX(timestamp) AS last_touch,  
user_id,utm_campaign, page_name  
FROM page_visits  
GROUP BY user_id)  
WHERE page_name = '4 - purchase'  
GROUP BY utm_campaign  
ORDER BY 1 DESC;
```

Optimize The Campaign Budget

- The CoolTShirts can re-invest in 5 campaigns. According *last touch attribution*, the most successful 5 campaigns are :

1. Paid Search
2. Retargeting Ad
3. Retargeting Campaign
5. Ten Crazy Cool Tshirts Facts

