

code

# Marketing attribution

Analyze Data with SQL  
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# 1. Overview

CoolTShirts sells shirts of all kinds, as long as they are T-shaped and cool. Recently, CTS started a few marketing campaigns to increase website visits and purchases. Using touch attribution, they'd like to map their customers' journey: from initial visit to purchase. They can use that information to optimize their marketing campaigns.

In this project, we'll be helping them analyze the performance of their campaigns.

## 2. Get familiar with the CoolTShirts company

There is our CoolTShirts' user data (a few next rows).

page_name	timestamp	user_id	utm_campaign	utm_source
1 - landing_page	2018-01-24 03:12:16	10006	getting-to-know-cool-tshirts	nytimes
2 - shopping_cart	2018-01-24 04:04:16	10006	getting-to-know-cool-tshirts	nytimes
3 - checkout	2018-01-25 23:10:16	10006	weekly-newsletter	email
1 - landing_page	2018-01-25 20:32:02	10030	ten-crazy-cool-tshirts-facts	buzzfeed
2 - shopping_cart	2018-01-25 23:05:02	10030	ten-crazy-cool-tshirts-facts	buzzfeed

```
-- the number of distinct campaigns
SELECT
    COUNT(DISTINCT (utm_campaign)) AS 'count_campaigns'
FROM
    page_visits;

-- the number of distinct sources
SELECT
    COUNT(DISTINCT (utm_source)) AS 'count_sources'
FROM
    page_visits;

-- relation between campaigns and sources
SELECT DISTINCT
    utm_campaign,
    utm_source
FROM
    page_visits;
```

CoolTShirt Company used 8 different marketing companies from 6 sources.

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

There are 4 pages on the company's website.

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

### 3. What is the user journey?

Here's the the count of first touches per campaign and source

utm_campaign	utm_source	count_first_touch
interview-with-cool-tshirts-founder	medium	622
getting-to-know-cool-tshirts	nytimes	612
ten-crazy-cool-tshirts-facts	buzzfeed	576
cool-tshirts-search	google	169

```
-- #3 the number of first touches is each campaign
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 AS 'ft'
      JOIN page_visits AS '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;
```

Here's the the count of last touches per campaign and source

utm_campaign	utm_source	count_last_touch
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

```
-- #4 the number of last touches is each campaign
WITH
  last_touchAS (
    SELECT
      user_id,
      MAX(timestamp) AS 'last_touch_at'
    FROM
      page_visits
    GROUP BY
      1
  ),
  lt_attr AS (
    SELECT
      lt.user_id,
      lt.last_touch_at,
      pv.utm_campaign,
      pv.utm_source,
      pv.page_name
    FROM
      last_touchAS 'lt'
      JOIN page_visits AS 'pv' ON lt.user_id= pv.user_id
      AND lt.last_touch_at= pv.timestamp
  )
SELECT
  lt_attr.utm_campaign,
  lt_attr.utm_source,
  COUNT(*)
FROM
  lt_attr
GROUP BY
  1,
  2
ORDER BY
  3 DESC;
```

# 361

The total number of purchases





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

utm_campaign	utm_source	count_purchases
weekly-newsletter	email	115
retargeting-ad	facebook	113
retargeting-campaign	email	54
paid-search	google	52
getting-to-know-cool-tshirts	nytimes	9
ten-crazy-cool-tshirts-facts	buzzfeed	9
interview-with-cool-tshirts-founder	medium	7
cool-tshirts-search	google	2

## 4. Conclusions

8 different marketing companies from 6 sources were implement.

The total number of purchases on CoolTShirt's website was 361.

At the same time, the analysis shows that users respond very well to media campaigns: interviews, articles in nytimes and buzzfeed.

However, most of the recent touches that lead to purchases occur as a result of marketing campaigns related to email newsletters and advertising on Facebook and Google.