



CoolTShirts Attribution

Learn SQL from Scratch

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CoolTShirts Table of Contents

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?

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?

1. Get Familiar with CoolTShirts

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

- The source is the type of channel the user campaign from (Google, email, Medium, etc...)
- The campaign is the specific strategy that is employed to get people to perform an action (newsletter, paid search ad, retargeting ad, etc...)
- There can be multiple campaigns on one source, and multiple sources for each campaign.

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

8

<- Total distinct campaigns

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

6

<- Total distinct sources

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

utm_campaign	utm_source
getting-to-know-cool-t-shirts	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

1. Get Familiar with CoolTShirts (cont'd)

What pages are on CoolTShirts.com?

- CoolTShirts has four page types: a landing page, the shopping cart page, the checkout page and a purchase completion page.

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

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

2. What is the user journey?

How many first touches is each campaign responsible for?

- Using the MIN for timestamps on user_id you're able to determine which campaign and source were the reasons why users chose to come to CoolTShirts.com
- In this instance, the "organic content" from the NYTimes and Medium saw the most visits.

```
-- COUNT total first touches for each campaign
-- Create temp table that finds first touches by user id
WITH first_touch AS (
    SELECT user_id,
           MIN(timestamp) as first_touch_at
    FROM page_visits
    GROUP BY user_id),
--Create 2nd temp table that adds source and
--campaign from page_visits and joins them on user_id and timestamp
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
)
--Total rows where first touch is associated with a campaign
--and a source grouping by campaign
SELECT ft_attr.utm_source AS 'Source',
       ft_attr.utm_campaign AS 'Campaign',
       COUNT(*) AS 'Total'
FROM ft_attr
GROUP BY utm_campaign;
```

Source	Campaign	Total
google	cool-tshirts-search	171
nytimes	getting-to-know-cool-tshirts	615
medium	interview-with-cool-tshirts-founder	623
buzzfeed	ten-crazy-cool-tshirts-facts	577

2. What is the user journey? (cont'd)

How many last touches is each campaign responsible for?

- Using the MAX for timestamps on user_id you're able to determine which campaign and source were the last reason users chose to come to CoolTShirts.com
- In this instance, the advertising campaigns and newsletters drove a bulk of the visits.

```
-- COUNT total last touches for each campaign
-- Create temp table that finds last touches by user id
WITH last_touch AS (
  SELECT user_id,
         MAX(timestamp) as last_touch_at
  FROM page_visits
  GROUP BY user_id),
--Create 2nd temp table that adds source and
--campaign from page_visits and joins them on user_id and timestamp
lt_attr AS (
  SELECT lt.user_id,
         lt.last_touch_at,
         pv.utm_source,
         pv.utm_campaign
  FROM last_touch lt
  JOIN page_visits pv
  ON lt.user_id = pv.user_id
  AND lt.last_touch_at = pv.timestamp
)
--Total rows where last touch is associated with a campaign
--and a source grouping by campaign
SELECT lt_attr.utm_source AS 'Source',
       lt_attr.utm_campaign AS 'Campaign',
       COUNT(*) AS 'Total'
FROM lt_attr
GROUP BY utm_campaign;
```

Source	Campaign	Total
google	cool-tshirts-search	62
nytimes	getting-to-know-cool-tshirts	233
medium	interview-with-cool-tshirts-founder	185
google	paid-search	181
facebook	retargetting-ad	452
email	retargetting-campaign	248
buzzfeed	ten-crazy-cool-tshirts-facts	192
email	weekly-newsletter	451

2. What is the user journey? (cont'd)

How many purchases were made and which pages did users come from?

- Conversion rate of distinct user_ids to paid customers is 18% (361 / 1979)
- Most purchasers come from Facebook ad campaigns or email sources (either from the newsletter or retargeting campaigns)

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

Answer = 361

```
-- COUNT total last touches for each campaign
-- Create temp table that finds last touches by user id
WITH last_touch AS (
  SELECT user_id,
         MAX(timestamp) as last_touch_at
  FROM page_visits
  --add WHERE clause
  WHERE page_name = '4 - purchase'
  GROUP BY user_id),
--Create 2nd temp table that adds source and
--campaign from page_visits and joins them on user_id and timestamp
lt_attr AS (
  SELECT lt.user_id,
         lt.last_touch_at,
         pv.utm_source,
         pv.utm_campaign
  FROM last_touch lt
  JOIN page_visits pv
  ON lt.user_id = pv.user_id
  AND lt.last_touch_at = pv.timestamp
)
--Total rows where last touch is associated with a campaign
--and a source grouping by campaign
SELECT lt_attr.utm_source AS 'Source',
       lt_attr.utm_campaign AS 'Campaign',
       COUNT(*) AS 'Total Purchases'
FROM lt_attr
GROUP BY utm_campaign;
```

Source	Campaign	Total
google	cool-tshirts-search	3
nytimes	getting-to-know-cool-tshirts	10
medium	interview-with-cool-tshirts-founder	8
google	paid-search	55
facebook	retargeting-ad	122
email	retargeting-campaign	57
buzzfeed	ten-crazy-cool-t-shirts-facts	10
email	weekly-newsletter	119

2. What is the user journey? (cont'd)

What is the typical user journey?

- **First Touch.** 91% of all users first became aware of CoolTShirts due to “organic” content from Medium, The New York Times and BuzzFeed, with the remainder performing a Google search to find the site.
- **Last Touch.** 35% of all users who most recently visited CoolTShirts came from ads on Facebook and email retargeting. This indicates that repeatedly engaging with CoolTShirts audience through ads is a smart strategy to get users to return to the website.
- **Conversion.** 47% of all purchasers had their last touch result from a retargeting campaign on either Facebook or an email send. Only 7% of users converted directly after visiting the organic content from Medium, The New York Times or BuzzFeed. This indicates that CoolTShirts’ customers frequently have multiple touchpoints with the site or advertising campaigns prior to purchasing.

3. Optimize the campaign budget

Which five campaigns should CoolTShirts pick to focus on?

- It's a bit of a misnomer to consider all of the campaigns "campaigns" as the buckets should really be "paid advertising," "content marketing," and "organic traffic." See to the right for how the classification would look.
- Looking at just First Touch or just Last Touch misses the picture of how users find and then transact on CoolTShirts.com. 91% of unique user_ids found the site through one of the content marketing channels with the rest coming from organic traffic.
- Attributed purchases came from 4 main sources: Facebook retargeting ads, the Weekly Newsletter, Email retargeting, and Paid Search ads. This would suggest heavying up on only paid advertising with additional effort on the email campaigns.
- While it is our recommendation that these four campaigns continue to get attention, it's clear that the content_marketing strategies need to be increased as well. Since the top of the funnel of users is predominantly driven by these content_marketing campaigns, purchases would decrease overall if they didn't drive initial traffic to CoolTShirts.com

Campaign	Category
cool-tshirts-search	organic_traffic
getting-to-know-cool-t-shirts	content_marketing
interview-with-cool-ts-hirts-founder	content_marketing
ten-crazy-cool-tshirts-facts	content_marketing
weekly-newsletter	organic_traffic
retargeting-campaign	content_marketing
retargeting-ad	paid_advertising
paid-search	paid_advertising