

Codecademy: Learn SQL from Scratch

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First & Last Touch Attribution Capstone Project Summary

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?

Get Familiar with the Company

Get Familiar with the Company

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

Cool T Shirts has 8 campaigns and utilizes 6 sources.

The difference between `utm_campaign` and `utm_source`:

A `utm_source` identifies which website drove traffic such as google or facebook.

A source can run multiple campaigns. A `utm_campaign` refers to the specific purpose of social media ad or email.

Campaigns	Sources
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

Campaigns
8
Sources
6

```
SELECT COUNT (DISTINCT utm_campaign) AS 'Campaigns'
FROM page_visits;
```

```
SELECT COUNT (DISTINCT utm_source) AS 'Sources'
FROM page_visits;
```

```
SELECT DISTINCT utm_campaign AS Campaigns,
                utm_source AS Sources
FROM page_visits;
```

Get Familiar with the Company

What pages are on their website?

1. Landing pages refer to a content page that contains product or service information
2. Shopping cart is the next step in the funnel, where a user adds an item or service to cart
3. Checkout page is where the user begins entering transaction data to complete a purchase
4. The purchase page is usually a page that indicates order submission / success

Pages
landing_page
shopping_cart
checkout
purchase

```
SELECT DISTINCT page_name AS  
'Pages'  
FROM page_visits;
```

What is the User Journey

What is the User Journey

How many first touches is each campaign responsible for?

First we query a set of all first touches and then group by both utm_campaign and utm_source.

Source	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

```
WITH first_touch AS (  
  SELECT user_id,  
         MIN(timestamp) as 'first_touch_at'  
  FROM page_visits  
  GROUP BY user_id)  
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,  
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 AS 'Source',  
       ft_attr.utm_campaign AS 'Campaign',  
       COUNT(*)  
FROM ft_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

What is the User Journey

How many last touches is each campaign responsible for?

First we query a set of all last touches and then group by both utm_campaign and utm_source.

Source	Campaign	Count
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

```
WITH last_touch AS (  
  SELECT user_id,  
         MAX(timestamp) AS 'last_touch_at'  
  FROM page_visits  
  GROUP BY user_id),  
ft_attr 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 ft_attr.utm_source AS 'Source',  
       ft_attr.utm_campaign AS 'Campaign',  
       COUNT(*) AS 'Count'  
FROM ft_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```


What is the User Journey

How many visitors make a purchase?

Conversions
361

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

What is the User Journey

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

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

```
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),  
ft_attr 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 ft.user_id = pv.user_id  
  AND ft.first_touch_at = pv.timestamp  
 )  
SELECT ft_attr.utm_source AS 'source',  
       ft_attr.utm_campaign AS 'Campaign',  
       COUNT(*) AS 'Count'  
FROM ft_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

What is the User Journey

What is the typical user journey?

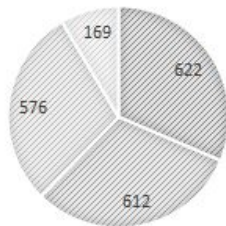
The typical user journey begins with article campaigns from the sources like NYT, BuzzFeed, Medium and Google.

However, these article campaigns are least likely to get last touch attribution.

Weekly newsletters and retargeting ads and campaigns drive 93% of conversions on purchase page that originally began with article-like campaigns.

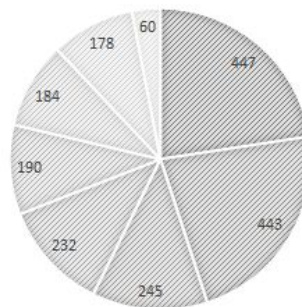
FIRST TOUCH ATTRIBUTION

■ interview-with-cool-tshirts-founder ■ getting-to-know-cool-tshirts
■ ten-crazy-cool-tshirts-facts ■ cool-tshirts-search



LAST TOUCH ATTRIBUTION

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



Optimize Campaign Budget

Optimize Campaign Budget

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

If limited to reinvesting in 5 campaigns only, CoolTShirts needs to find balance between driving traffic to the site but also driving traffic that will later convert.

Since article campaigns drive the most traffic to CoolTShirts website, the top 2 article pages 'getting-to-know-cool-tshirts' and 'interview-with-cool-tshirts-founder' should get additional marketing dollars allocated to push for more traffic and make up for the losses from the other articles that lose marketing dollars.

Since **weekly newsletters**, **retargeting ad** and **retargeting campaign** have the highest conversion rates, these should also be invested in.

Campaign	First Touch Attribution	Last Touch Attribution	Purchases	Purchases by Campaign
weekly-newsletter	0	447	115	32%
retargeting-ad	0	443	113	31%
retargeting-campaign	0	245	54	15%
paid-search	0	178	52	14%
getting-to-know-cool-tshirts	612	232	9	2%
ten-crazy-cool-tshirts-facts	576	190	9	2%
interview-with-cool-tshirts-founder	622	184	7	2%
cool-tshirts-search	169	60	2	1%