

MARCO ALEXANDER KLEMM | 2019.06.16

LEARN SQL FROM SCRATCH

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HOW MANY CAMPAIGNS AND SOURCES DOES COOLTSHIRTS USE AND HOW ARE THEY RELATED?

- ▶ The “source” parameter is all about answering the question, “Where is my traffic coming from?”
- ▶ The “campaign” parameter is all about answering the question, “Why is the traffic coming?”

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

SELECT COUNT(DISTINCT utm_source) AS 'Source Count'
FROM page_visits;

SELECT DISTINCT utm_campaign AS 'Campaign',
               utm_source AS 'Source'
FROM page_visits
ORDER BY 2;
```

Campaign Count	
8	
Source Count	
6	
Campaign	Source
ten-crazy-cool-tshirts-facts	buzzfeed
weekly-newsletter	email
retargeting-campaign	email
retargeting-ad	facebook
paid-search	google
cool-tshirts-search	google
interview-with-cool-tshirts-founder	medium
getting-to-know-cool-tshirts	nytimes

WHAT PAGES ARE ON THEIR WEBSITE?

- ▶ There are four pages on the website

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

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

HOW MANY FIRST TOUCHES IS EACH CAMPAIGN RESPONSIBLE FOR?

```
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 ft  
  JOIN page_visits 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;
```

- ▶ The count of first touches for each campaign is listed in the following table

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

HOW MANY LAST TOUCHES IS EACH CAMPAIGN RESPONSIBLE FOR?

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

- ▶ The count of last touches for each campaign is listed in the following table

Source	Campaign	Count
email	weekly-newsletter	447
facebook	retargeting-ad	443
email	retargeting-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

HOW MANY VISITORS MAKE A PURCHASE?

- ▶ There are 361 visitors with at least one purchase

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

Visitors with purchase
361

HOW MANY LAST TOUCHES ON THE PURCHASE PAGE IS EACH CAMPAIGN RESPONSIBLE FOR?

```
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),  
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  
)  
SELECT lt_attr.utm_source AS 'Source',  
       lt_attr.utm_campaign AS 'Campaign',  
       COUNT(*) AS 'Count'  
FROM lt_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

- ▶ The count of last touches on the purchase page for each campaign is listed in the following table

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

WHAT IS THE TYPICAL USER JOURNEY?

- ▶ Most first touches are coming from three campaigns: „interview-with-cool-tshirts-founder“, „getting-to-know-cool-tshirts“ and „ten-crazy-cool-tshirts-facts“
- ▶ But this three campaigns are not responsible for the majority of purchases
- ▶ Most visitors need an additional touch with an email or a retargeting ad to make a purchase

COOLTSHIRTS CAN RE-INVEST IN 5 CAMPAIGNS. WHICH SHOULD THEY PICK AND WHY?

- ▶ To operate successfully CoolTShirts needs visitors and purchases
- ▶ The campaigns „interview-with-cool-tshirts-founder“, „getting-to-know-cool-tshirts“ and „ten-crazy-cool-tshirts-facts“ have generated 1810 of 1979 first touches ($\approx 91\%$)
- ▶ The campaigns „weekly-newsletter“ and „retargeting-ad“ have generated 228 of 361 purchases ($\approx 63\%$)
- ▶ Therefore they should pick this five campaigns
- ▶ Note: In real life i would prefer costs and attributed revenues to calculate a ROAS (Return on Advertising Spend). For example the „paid-search“ campaign could be highly profitable - we are just not able to see this with the given data