



Attribution Queries

Learn SQL from Scratch

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1. Get familiar with CoolTShirts

1.1 Campaigns for CoolTShirts

As a company several marketing campaigns and sources have been utilized to sell our companies products.

Creating different queries that look at our system we were able to determine the different campaigns and sources and other information that we may need.

- Utm_campaign will give us the marketing campaigns that we are using.
- Utm_source will give us the medium that we are using. We use ads in other mediums to direct people to our website.

How many campaigns and sources does CoolTShirts use? Which source is used for each campaign?

- 8 Campaigns
- 8 Sources
- List of the 8 marketing campaigns with the medium sources each marketing campaign is using.

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

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

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

Query Results

COUNT(DISTINCT utm_campaign)

8

COUNT(DISTINCT utm_source)

8

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

1.2 Pages for CoolTShirts

What pages are on the website?

We have several pages on our website.

As a customer navigates through the website and the purchasing process they will visit several parts of our website.

It is important to see how far customers go through our website. Whether they are just visiting and exploring, they are purchasing or even if they almost purchase.

Listed here is a query we use just to show the different pages we have on our website.

There are 4 distinct pages that our customer use.

Query Results

Page_name
1 – Landing_page
2 – shopping_cart
3 – Checkout
4 - purchase

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

2. What is the user journey?

2.1 First touches from a campaign

Running a query we can see when and where a customer first began looking at our company from our marketing campaigns.

This information will tell us where the user is starting their journey with us. By finding out where the customer started from, it will also identify for us which marketing campaign helped us get this customer to our company.

From our query we have 4 marketing campaigns bringing in some first time touches to our website.

```
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,  
       COUNT(utm_campaign)  
FROM first_touch ft  
JOIN page_visits pv  
  ON ft.user_id = pv.user_id  
  AND ft.first_touch_at = pv.timestamp  
GROUP BY 4  
ORDER BY 5 DESC;
```

user_id	first_touch_at	utm_source	utm_campaign	COUNT(utm_campaign)
99990	2018-01-13 23:30:09	medium	interview-with-cool-tshirts-founder	622
99933	2018-01-25 00:04:39	nytimes	getting-to-know-cool-tshirts	612
99765	2018-01-04 05:59:46	buzzfeed	ten-crazy-cool-tshirts-facts	576
99684	2018-01-13 13:20:49	google	cool-tshirts-search	169

2.2 Last touches from a campaign

Running a query we can see when and where the marketing campaign ended on our website.

This helps us to see which customers purchased or just viewed our products.

Seeing this information can help us determine which marketing campaign can help us further our business with sales and not just customer traffic.

```
WITH last_touch AS (  
    SELECT user_id,  
           MAX(timestamp) AS  
last_touch_at  
    FROM page_visits  
    GROUP BY user_id)  
SELECT lt.user_id,  
       lt.last_touch_at,  
       pv.page_name,  
       pv.utm_source,  
       pv.utm_campaign,  
       COUNT(utm_campaign)  
FROM last_touch lt  
JOIN page_visits pv  
  ON lt.user_id = pv.user_id  
 AND lt.last_touch_at =  
pv.timestamp  
GROUP BY 5  
ORDER BY 6 DESC;
```

user_id	last_touch_at	page_name	utm_source	utm_campaign	COUNT(utm_campaign)
99933	2018-01-26 06:18:39	4 - purchase	email	weekly-newsletter	447
99928	2018-01-24 05:26:09	3 - checkout	facebook	retargetting-ad	443
99990	2018-01-16 11:35:09	3 - checkout	email	retargetting-campaign	245
99589	2018-01-15 04:55:43	2 - shopping_cart	nytimes	getting-to-know-cool-tshirts	232
99765	2018-01-04 05:59:47	2 - shopping_cart	buzzfeed	ten-crazy-cool-tshirts-facts	190
99838	2018-01-02 07:40:34	3 - checkout	medium	interview-with-cool-tshirts-founder	184
98840	2018-01-10 04:58:48	3 - checkout	google	paid-search	178
99344	2018-01-18 21:36:32	2 - shopping_cart	google	cool-tshirts-search	60

2.3 Visitors make a purchase

We can also determine how many customers purchased from us that came from these marketing campaigns.

Using our 8 marketing campaigns we were able to get 361 purchases.

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

COUNT(DISTINCT user_id)
361

2.4 Last touches on purchase page

Running a specific query on purchase page we can see which marketing campaign brought in the most business that actually purchased with our company.

Seeing this information can help us determine which marketing campaign can help us further our business with sales and not just customer traffic.

```
WITH last_touch AS (  
  SELECT user_id,  
         MAX(timestamp) AS last_touch_at  
  FROM page_visits  
  GROUP BY user_id)  
SELECT lt.user_id,  
       lt.last_touch_at,  
       pv.utm_source,  
       pv.utm_campaign,  
       COUNT(utm_campaign)  
FROM last_touch lt  
JOIN page_visits pv  
  ON lt.user_id = pv.user_id  
  AND lt.last_touch_at = pv.timestamp  
GROUP BY 4  
ORDER BY 5;
```

user_id	last_touch_at	utm_source	utm_campaign	COUNT(utm_campaign)
99933	2018-01-26 06:18:39	email	weekly-newsletter	447
99928	2018-01-24 05:26:09	facebook	retargetting-ad	443
99990	2018-01-16 11:35:09	email	retargetting-campaign	245
99589	2018-01-15 04:55:43	nytimes	getting-to-know-cool-tshirts	232
99765	2018-01-04 05:59:47	buzzfeed	ten-crazy-cool-tshirts-facts	190
99838	2018-01-02 07:40:34	medium	interview-with-cool-tshirts-founder	184
98840	2018-01-10 04:58:48	google	paid-search	178
99344	2018-01-18 21:36:32	google	cool-tshirts-search	60

2.5 User Journey from the marketing campaigns

Running another query we can determine how many times the marketing campaigns were able to get customers to our company.

From the data below we can see that our weekly newsletter and retargeting-ad brought in the most traffic from customers.

```
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)  
SELECT lt.user_id,  
       lt.last_touch_at,  
       pv.utm_source,  
       pv.utm_campaign,  
       COUNT(utm_campaign)  
FROM last_touch lt  
JOIN page_visits pv  
  ON lt.user_id = pv.user_id  
  AND lt.last_touch_at = pv.timestamp  
GROUP BY 4  
ORDER BY 5;
```

user_id	last_touch_at	utm_source	utm_campaign	COUNT(utm_campaign)
95650	2018-01-18 00:25:00	google	cool-tshirts-search	2
83547	2018-01-10 18:20:21	medium	interview-with-cool-tshirts-founder	7
92172	2018-01-16 15:15:29	nytimes	getting-to-know-cool-tshirts	9
98651	2018-01-15 04:17:36	buzzfeed	ten-crazy-cool-tshirts-facts	9
94567	2018-01-19 16:37:58	google	paid-search	52
99285	2018-01-24 09:00:58	email	retargeting-campaign	54
99897	2018-01-06 09:41:19	facebook	retargeting-ad	113
99933	2018-01-26 06:18:39	email	weekly-newsletter	115

3. Optimize the campaign budget

Going forward with 5 marketing campaigns

After gathering all our data our company is looking into investing more of our time with 5 of the 8 marketing campaigns we have been doing business with.

Reviewing all of our data from the previous slides our best move for the future would be to continue our relationships with the following:

utm_source	utm_campaign
email	weekly-newsletter
facebook	retargetting-ad
email	retargetting-campaign
nytimes	getting-to-know-cool-tshirts
buzzfeed	ten-crazy-cool-tshirts-facts

These 5 marketing campaigns were able to bring in the most customers who purchased our products which makes them the most valuable to us to proceed with. Bringing in traffic to our company is very helpful but ultimately we need customers to purchase and these marketing campaigns were able to help us deliver.