



First- and Last-Touch Attribution

Learn SQL from Scratch

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1. CoolTShirts Online Marketing

1.1 CoolTShirts Campaigns

- 8 distinct campaigns used
 - What is a campaign? - marketing material typically organized around a theme and designed to influence the decision of the consumer
 - CoolTShirts search (Google)
 - “Getting to Know CoolTShirts” (New York Times)
 - Interview with CoolTShirts founder
 - Retargeting ad (Facebook)
 - Retargeting campaign (email)
 - Paid search (Google)
 - “10 Crazy CoolTShirts Facts” (Buzzfeed)
 - Weekly newsletter (email)

utm_source	utm_campaign
nytimes	getting-to-know-cool-tshirts
email	weekly-newsletter
buzzfeed	ten-crazy-cool-tshirts-facts
email	retargeting-campaign
facebook	retargeting-ad
medium	interview-with-cool-tshirts-founder
google	paid-search
google	cool-tshirts-search

1.1 CoolTShirts Sources

- 6 distinct sources
 - What is a source? - methods for delivering or obtaining marketing material
 - BuzzFeed
 - Email
 - Facebook
 - Google
 - Medium
 - New York Times

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

2. CoolTShirts User Journey

2.1 Website

- 4 website pages
 - Landing page
 - Shopping Cart
 - Checkout
 - Purchase

Page_name
1 – landing_page
2 – shopping_cart
3 - checkout
4 - purchase

2.2 Customer First-Touch

- Campaign customer first-touches

first_touch_at	utm_source	utm_campaign
2018-01-01 00:58:13	nytimes	getting-to-know-cool-tshirts
2018-01-01 01:42:56	medium	interview-with-cool-tshirts-founder
2018-01-01 05:04:18	google	cool-tshirts-search
2018-01-01 06:37:30	buzzfeed	ten-crazy-cool-tshirts-facts
2018-01-02 15:02:56	email	retargetting-campaign
2018-01-02 18:09:53	facebook	retargetting-ad
2018-01-02 19:43:54	email	weekly-newsletter
2018-01-03 20:47:26	google	paid-search

```
WITH first_touch AS (  
  SELECT utm_campaign,  
         MIN(timestamp) as first_touch_at  
  FROM page_visits  
  GROUP BY utm_campaign)  
SELECT ft.utm_campaign,  
       ft.first_touch_at,  
       pv.utm_source,  
       pv.utm_campaign  
FROM first_touch ft  
JOIN page_visits pv  
  ON ft.utm_campaign = pv.utm_campaign  
  AND ft.first_touch_at = pv.timestamp;
```


2.3 First-Touch Campaigns

- Customers are first driven to the website by
 - Interest in the founder
 - Learning more about CoolTShirts
 - Curiosity about crazy CoolTShirts facts

ft.attr.utm_source	ft.attr.utm_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),  
ft_attr AS (  
  SELECT ft.user_id,  
         ft.first_touch_at,  
         pv.utm_source,  
         pv.utm_campaign,  
         pv.page_name  
  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,  
       ft_attr.utm_campaign,  
       COUNT(*)  
FROM ft_attr  
GROUP BY 2,1  
ORDER BY 3 DESC;
```

2.4 Last-Touch Campaigns

- Customers are brought back to the website by
 - Source: email and Facebook
 - Campaigns: Weekly Newsletter, Retargeting Ad and Retargeting Campaign

lt.attr.utm_source	lt.attr.utm_campaign	COUNT(*)
email	weekly-newsletter	447
facebook	retargeting-ad	443
email	retargeting-campaign	245
nytimes	getting-to-know-cool-tshirts	232
buzzfeed	ten-crazy-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),  
lt_attr AS (  
  SELECT lt.user_id,  
         lt.last_touch_at,  
         pv.utm_source,  
         pv.utm_campaign,  
         pv.page_name  
  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,  
       lt_attr.utm_campaign,  
       COUNT(*)  
FROM lt_attr  
GROUP BY 2  
ORDER BY 3 DESC;
```

3. Optimize the campaign budget

3.1 Optimize the campaign budget

- 361 users made purchases
- ~ 18% of website visitors make an actual purchase

Page_name	COUNT(DISTINCT user_id)
4 - purchase	361

3.2 Optimize the campaign budget

Campaigns responsible for final purchases

- Weekly Newsletter (email) - ~ 32%
- Retargeting Ad (Facebook) - ~ 31%
- Retargeting Campaign (email) - ~ 15%
- Paid Google searches - ~ 14%

lt_attr.utm_source	lt_attr.utm_campaign	COUNT(DISTINCT user_id)
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

3.3 Optimize the campaign budget

5 Campaigns CoolTShirts should reinvest in the following campaigns:

1. Interview with CoolTShirts Founder – helps drive first touches
2. Getting to Know CoolTShirts – helps drive first touches
3. Weekly Newsletter (email) – assists with last touch and final purchases
4. Retargeting Ad (Facebook) – assists with last touch and final purchases
5. Retargeting Campaign (email) – assists with last touch and final purchases

Thank You