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First and Last Touch Attribution

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12/3/2018

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1. Get Familiar with the Company

1.1 Get Familiar with CoolTShirts

CoolTShirts has 8 marketing campaigns and each campaign uses a specific source to drive customers to their site. There are a total of 6 different sources (google, nytimes, medium, facebook, email and buzzfeed).

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

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

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

SELECT DISTINCT utm_campaign AS "Campaign", utm_source
AS "Source"
FROM page_visits
GROUP BY 1;
```

1.2 Get Familiar with CoolTShirts

CoolTShirts has 4 pages on their website. Below is a list of their pages.

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

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

2. What is the User Journey?

2.1 What is the user journey?

4 campaigns are credited for bringing users to CoolTShirts' website for the first time. These campaigns and counts of "first touches" are listed below. The sources attributed to these first touches are medium, nytimes, buzzfeed and google.

Campaign	First Touch Count
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

```
WITH first_touch AS (
    SELECT user_id,
        MIN(timestamp) AS 'first_touch_at'
    FROM page_visits
    GROUP BY 1
),
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_campaign AS "Campaign",
      COUNT(*) AS "First Touch Count"
FROM ft_attr
GROUP BY 1
ORDER BY 2 DESC;
```

2.2 What is the user journey?

All 8 campaigns are responsible for last touches made by users. Campaign names and last touch counts are listed below. All 6 sources were utilized for last touches.

Campaign	Last Touch Count
weekly-newsletter	447
retargetting-ad	443
retargetting-campaign	245
getting-to-know-cool-tshirts	232
ten-crazy-cool-tshirts-facts	190
interview-with-cool-tshirts-founder	184
paid-search	178
cool-tshirts-search	60

```
WITH last_touch AS (
    SELECT user_id,
        MAX(timestamp) AS 'last_touch_at'
    FROM page_visits
    GROUP BY 1
),
lt_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 lt_attr.utm_campaign AS "Campaign",
       COUNT(*) AS "Last Touch Count"
FROM lt_attr
GROUP BY 1
ORDER BY 2 DESC;
```

2.3 What is the user journey?

361 site visitors made a purchase from CoolTShirts. I ran a second query to find what campaigns were the most successful. The results are shown below. The weekly newsletter and retargeting-ad generated the most purchases.

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

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

SELECT utm_campaign AS "Campaign", utm_source AS
"Source", COUNT (DISTINCT user_id) AS "Purchases"
FROM page_visits
WHERE page_name = "4 - purchase"
GROUP BY 1
ORDER BY 3 DESC;
```

2.4 What is the user journey?

Below shows how many last touches each campaign was responsible for.

Campaign	Last Touch Count
weekly-newsletter	115
retargetting-ad	113
retargetting-campaign	54
paid-search	52
getting-to-know-cool-tshirts	9
ten-crazy-cool-tshirts-facts	9
interview-with-cool-tshirts-founder	7
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 1
),
lt_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 lt_attr.utm_campaign AS "Campaign",
      COUNT(*) AS "Last Touch Count"
FROM lt_attr
GROUP BY 1
ORDER BY 2 DESC;
```

2.5 What is the user journey?

The typical user was brought to the landing page of CoolTShirts' website for the first time from one of the below campaigns:
- interview-with-cool-tshirt-founder
- getting-to-know-cool-tshirts
- ten-crazy-cool-tshirts-facts
- cool-tshirts-search

The typical user's last touch (prior to purchase) was directed from a campaign that used emails and Facebook for retargeting ads.

The typical user who made a purchase was directed to the site from a weekly newsletter or retargeting ad that was sent through email or Facebook.

3. Optimize the Campaign Budget

3.1 Optimize the Campaign Budget

In conclusion of this analysis, CoolTShirts should re-invest in these 5 campaigns:

1. interview-with-cool-tshirts-founder
2. getting-to-know-cool-tshirts
3. ten-crazy-cool-tshirts-fact
4. weekly-newsletter
5. retargeting-ad

The first 3 mentioned campaigns (interview-with-cool-tshirts-founder, getting-to-know-cool-tshirts and ten-crazy-cool-tshirts-facts) brought the most visitors to CoolTShirts website for the first time and the last 2 mentioned campaigns (weekly-newsletter and retargeting-ad) were responsible for the most last touches/purchases. There was a large drop off when looking at the next in line campaigns responsible for first/last touch.