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# CAPSTONE: ATTRIBUTION



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# GET FAMILIAR WITH COOLTSHIRTS

- ▶ How many campaigns and sources does CoolTShirts use? Which source is used for each campaign?
  - ▶ There is a total of 8 campaigns and 6 sources used
  - ▶ Email and Google seem to be the more popular sources as both are tied to two campaigns each

Query Results	
Number of Campaigns	
8	
Number of Sources	
6	
Campaigns	Sources
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  --1.1 Number of Campaigns
2  SELECT COUNT(DISTINCT utm_campaign) AS 'Number of Campaigns'
3  FROM page_visits;
4
5  --1.2 Number of Sources
6  SELECT COUNT(DISTINCT utm_source) AS 'Number of Sources'
7  FROM page_visits;
8
9  --1.3 Relationship between Sources and Campaigns
10 SELECT DISTINCT utm_campaign AS 'Campaigns',
11                 utm_source AS 'Sources'
12 FROM page_visits;
```

## GET FAMILIAR WITH COOLTSHIRTS CONT.

- ▶ What pages are on the CoolTShirts website?
  - ▶ There are four unique pages on the website

Query Results
Page Names
1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase

```
1  --2. Page Names
2  SELECT DISTINCT page_name AS 'Page Names'
3  FROM page_visits;
```

# WHAT IS THE USER JOURNEY?

- ▶ How many first touches is each campaign responsible for?
  - ▶ Out of the 8 campaigns only 4 of them account for the first touch
  - ▶ Of those 4 campaigns, each had a different 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

```
1  --3. First Touches per Campaign
2  WITH first_touch AS (
3      SELECT user_id,
4             MIN(timestamp) AS first_touch_at
5      FROM page_visits
6      GROUP BY user_id)
7  ft_at AS(
8      SELECT ft.user_id,
9             ft.first_touch_at,
10            pv.utm_source,
11            pv.utm_campaign
12  FROM first_touch ft
13  JOIN page_visits pv
14      ON ft.user_id = pv.user_id
15      AND ft.first_touch_at = pv.timestamp
16  )
17  SELECT ft_at.utm_source AS 'Source',
18         ft_at.utm_campaign AS 'Campaign',
19         COUNT(*) AS COUNT
20  FROM ft_at
21  GROUP BY 1, 2
22  ORDER BY 3 DESC;
```

## WHAT IS THE USER JOURNEY? CONT.

- ▶ How many last touches is each campaign responsible for?
  - ▶ Email had the most last touches with both campaigns landing in the top three
  - ▶ Google had by far the least amount of last touches with 7th and 8th place campaigns

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

```

1  --4. Last Touches per Campaign
2  WITH last_touch AS (
3      SELECT user_id,
4             MAX(timestamp) AS last_touch_at
5      FROM page_visits
6      GROUP BY user_id),
7  ft_attr AS (
8      SELECT lt.user_id,
9             lt.last_touch_at,
10            pv.utm_source,
11            pv.utm_campaign
12     FROM last_touch lt
13     JOIN page_visits pv
14     ON lt.user_id = pv.user_id
15     AND lt.last_touch_at = pv.timestamp
16  )
17  SELECT ft_attr.utm_source AS 'Source',
18         ft_attr.utm_campaign AS 'Campaign',
19         COUNT(*) AS Count
20  FROM ft_attr
21  GROUP BY 1, 2
22  ORDER BY 3 DESC;

```

## WHAT IS THE USER JOURNEY? CONT.

- ▶ How many visitors make a purchase?
  - ▶ 361 Users made a purchase

Users that Purchase
361

```
1  --5. Users who made a purchase
2  SELECT COUNT(DISTINCT user_id) AS 'Users that Purchase'
3  FROM page_visits
4  WHERE page_name = '4 - purchase';
```

## WHAT IS THE USER JOURNEY? CONT.

- ▶ How many last touches on the purchase page is each campaign responsible for?
  - ▶ Once again email is two of the top three in these results as well
  - ▶ Interesting find that the four campaigns which contributed to the first touch have the lowest amount of last touches

Source	Campaign	Count
email	weekly-newsletter	115
facebook	retargetting-ad	113
email	retargetting-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

```

1  --6. LT per Campaign that led to a purchase
2  WITH last_touch AS (
3      SELECT user_id,
4             MAX(timestamp) AS last_touch_at
5      FROM page_visits
6      WHERE page_name = '4 - purchase'
7      GROUP BY user_id),
8  ft_attr AS (
9      SELECT lt.user_id,
10         lt.last_touch_at,
11         pv.utm_source,
12         pv.utm_campaign
13     FROM last_touch lt
14     JOIN page_visits pv
15     ON lt.user_id = pv.user_id
16     AND lt.last_touch_at = pv.timestamp
17 )
18 SELECT ft_attr.utm_source AS 'Source',
19        ft_attr.utm_campaign AS 'Campaign',
20        COUNT(*) AS Count
21 FROM ft_attr
22 GROUP BY 1, 2
23 ORDER BY 3 DESC;

```



# WHAT IS THE TYPICAL USER JOURNEY

- ▶ The typical user journey consists of three elements: first touches, last touches and purchases per campaign.
  - ▶ Of these three the most profitable campaign in the user journey is the Weekly Newsletter which brought the most last touches and purchases.
  - ▶ The Interview brought the most traffic to the site as a first touch, however it was the second to last in purchases next to the “cool tshirts” google search.
  - ▶ The typical user is brought to the site with an engaging article but the retargeting and weekly emails are what bring them back to purchase.



# OPTIMIZE THE CAMPAIGN BUDGET

- ▶ CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?
  - ▶ interview-with-cool-tshirts-founder
  - ▶ getting-to-know-cool-tshirts
    - ▶ These two campaigns had the most first touches, so it brought the most traffic to the site initially
  - ▶ retargeting-ad
  - ▶ retargeting-campaign
    - ▶ The retargeting campaigns are important to re-invest in because they account for almost half of the sales brought in
  - ▶ paid-search
    - ▶ While paid search was one of the lowest last touches it was still the 4th most profitable campaign. Investing in this campaign will likely increase this number