



FIRST-AND LAST TOUCH ATTRIBUTIONS

Learn SQL from Scratch

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- CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?

1. GET FAMILIAR WITH COOLTSHIRTS

CoolTShirts sells shirts of all kinds, as long as they are T-shaped and cool.

1.1 GET FAMILIAR WITH COOLTSHIRTS

- How many campaigns and sources does CoolTShirts use? Which source is used for each campaign?
 - CoolTShirts uses 8 campaigns across 6 different sources
 - The table to the right shows in detail which source is used for each campaign
- A campaign can be defined as a message designed to get a group of prospective customers to react in a particular way.
- A source can be defined as a communication channel used to present the campaign (i.e. email, buzzfeed, google, etc.).

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

SELECT COUNT(DISTINCT utm_source) AS Sources
FROM page_visits;

SELECT DISTINCT utm_campaign AS Campaigns,
               utm_source AS Sources
FROM page_visits;
```

SQL Results

Campaigns
8

Sources
6

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

1.2 GET FAMILIAR WITH COOLTSHIRTS – CONT'D

- What pages are on the CoolTShirts website?
 - Find the distinct values of the **page_name** column.
 - There are 4 unique pages on the ColTShirts website.

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

SQL Results

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

2. WHAT IS THE USER JOURNEY

2.1 WHAT IS THE USER JOURNEY

- How many **first** touches is each campaign responsible for?
 - 1,979 unique first touches are spread across 4 campaigns.
 - 3 of the 4 campaigns are articles while the 4th is a search engine search
 - The table to the right provides detail on how many first touches each campaign is 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,  
       ft_attr.utm_campaign,  
       COUNT(*)  
FROM ft_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

SQL Results

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

2.2 WHAT IS THE USER JOURNEY – CONT'D

- How many **last** touches is each campaign responsible for?
 - 1,979 unique last touches are spread across 8 campaigns.
 - Note, campaigns based on the last touch rank differently from those based on the first touch.
 - The table to the right provides detail on how many last touches each campaign is responsible for.

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

SQL Results

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

2.3 WHAT IS THE USER JOURNEY – CONT'D

- How many visitors make a **purchase**?
 - There are 361 customers that make a purchase.
 - Conversion rate from visitor to 'customer is 18% ($361 / 1,979 = 18\%$).

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

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),
ft_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 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;
```

SQL Results

Customers that Purchase
361

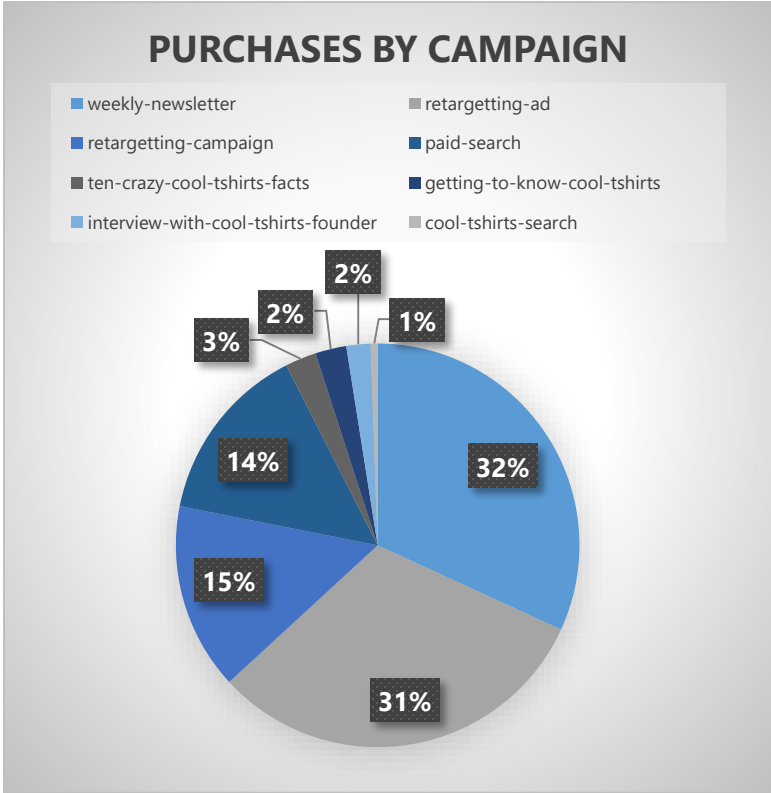
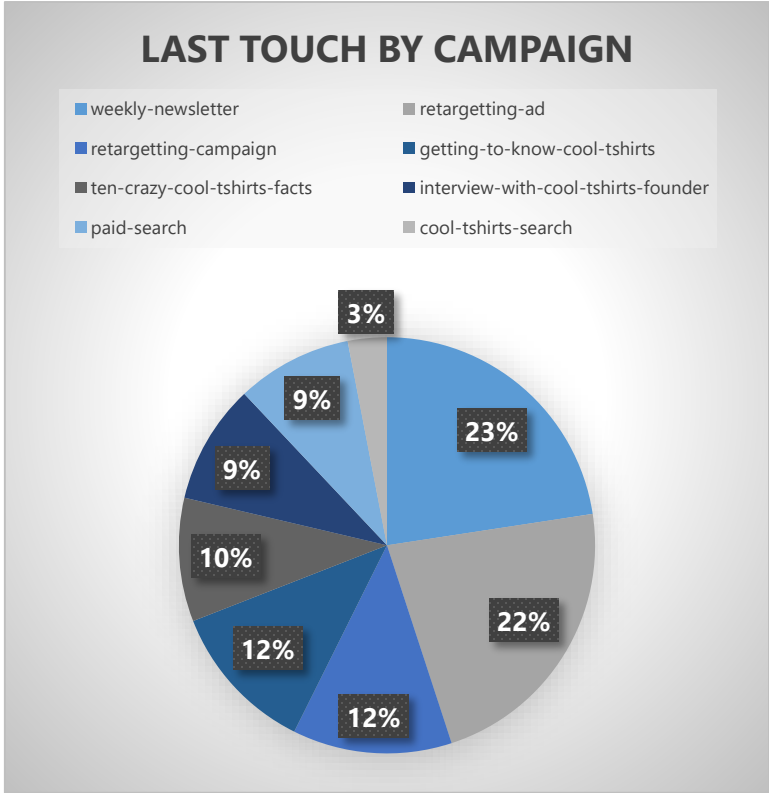
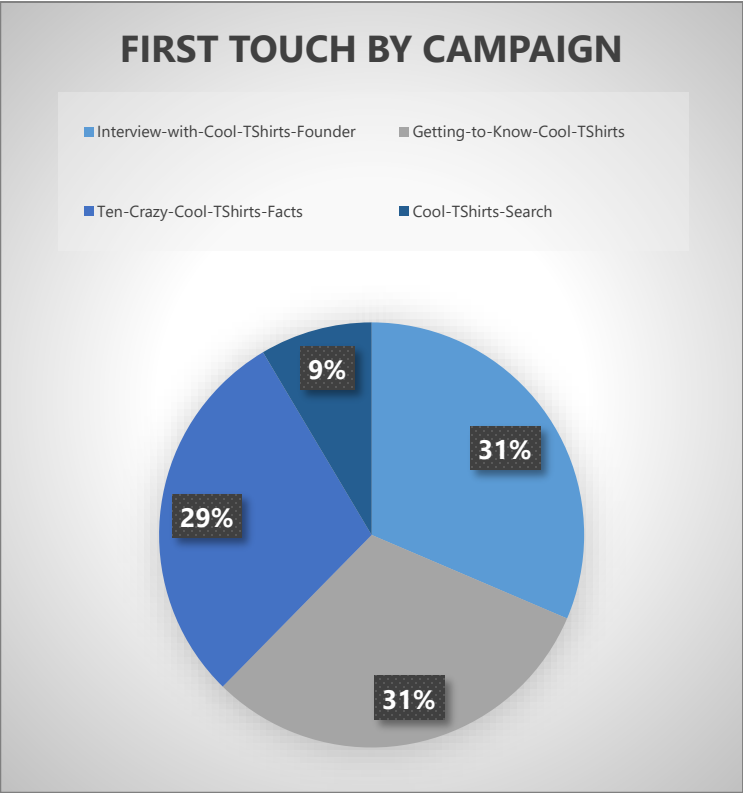
Source	Campaign	COUNT
email	weekly-newsletter	115
facebook	retargeting-ad	113
email	retargeting-campaign	54
google	paid-search	52
buzzfeed	ten-crazy-cool-tshirts-facts	9
nytimes	getting-to-know-cool-tshirts	9
medium	interview-with-cool-tshirts-founder	7
google	cool-tshirts-search	2

2.4 WHAT IS THE TYPICAL USER JOURNEY

- First touch campaigns
 - 4 campaigns are associated with bringing users to the site
 - Interview with Cool TShirts
 - Getting to Know Cool TShirts
 - Ten crazy cool TShirts facts
 - Cool TShirts search

- Last touch campaigns
 - 8 campaigns are associated with users to the site for potential purchase
 - 3 campaigns (none of which were in the first touch) account for majority
 - Weekly Newsletter
 - Retargeting Ad
 - Retargeting Campaign

- Purchases
 - 18% of users make a purchase
 - The 3 most successful last touch campaigns also result in the lion's share of the purchases (78%)
 - The first touch campaigns only account for a combined 7% of the purchases



3. OPTIMIZE THE CAMPAIGN BUDGET

3.1 OPTIMIZE THE CAMPAIGN BUDGET

- Which 5 campaigns should CoolTShirts re-invest in?
 - The resulting data from the analysis would suggest that there are 2 touch points required to get many of the potential customers to buy.
 - There are **3** campaigns that perform best at driving users to the website (highlighted in light yellow)
 - There are **2** campaigns that perform best at bringing users back to the website and ultimately making a purchase (highlighted in light green)
 - Recommendation: CoolTShirts should continue to invest in the campaigns highlighted in the bullet above.

Campaign	% 1st Touches	% Last Touches	% Purchases
Interview-with-Cool-TShirts-Founder	31%	9%	2%
Getting-to-Know-Cool-TShirts	31%	12%	2%
Ten-Crazy-Cool-TShirts-Facts	29%	10%	2%
Cool-TShirts-Search	9%	3%	1%
weekly-newsletter	0%	23%	32%
retargeting-ad	0%	22%	31%
retargeting-campaign	0%	12%	15%
paid-search	0%	9%	14%