Learn SQL from Scratch

Attribution Queries - Capstone Project

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Get Familiar with CoolTShirts

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

Utm_source - Identifies which touchpoint sent the traffic

Utm_campaign - Identifies the specific ad or email blast

```sql
SELECT COUNT (DISTINCT utm_campaign) AS
'Number_of_Campaigns'
FROM page_visits;

SELECT COUNT (DISTINCT utm_source) AS
'Number_of_Sources'
FROM page_visits;

SELECT DISTINCT utm_source AS 'Sources',
utm_campaign AS 'Campaign_Name'
FROM page_visits;
```

Number_of_Campaigns	
8	
Number_of_Sources	
6	

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

What pages are on the CoolTShirts website?

CoolTShirts has **4 pages in total** on its website

```sql
SELECT DISTINCT page_name AS 'Page_Name'
FROM page_visits;
```

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

CoolTShirts' User Journey

How many first touches is each campaign responsible for?

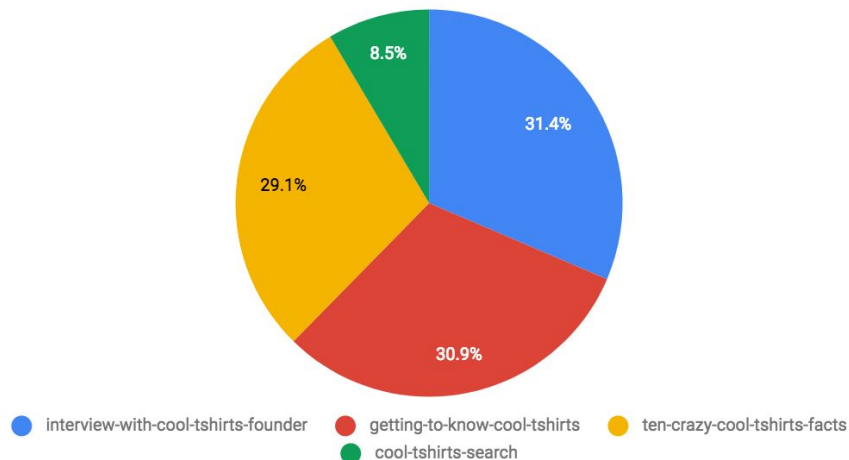There were **4 campaigns** responsible as the first point of contact with customers.

```sql
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 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_source AS 'First_Attr_Source',
       ft_attr.utm_campaign AS 'First_Attr_Campaign',
       COUNT (*) AS 'Total'
FROM ft_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

First_Attr_Source	First_Attr_Campaign	Total
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

How many first touches is each campaign responsible for?

- Campaign '**interview-with-cool-tshirts-founder**' was responsible for **622** first touches through **Medium**
- Campaign '**getting-to-know-cool-tshirts**' was responsible for **612** first touches through **The NY Times**
- Campaign '**ten-crazy-cool-tshirts-facts**' was responsible for **576** first touches through BuzzFeed.
- Campaign '**cool-tshirts-search**' was responsible for **169** first touches through **Google**.

First Touch Attribution Campaigns

31.4%
30.9%
29.1%
8.5%

- interview-with-cool-tshirts-founder
- getting-to-know-cool-tshirts
- ten-crazy-cool-tshirts-facts
- cool-tshirts-search

How many last touches is each campaign responsible for?

There were **8 campaigns** responsible as the last point of contact with customers before they potentially convert.

```sql
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 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_source AS 'Last_Attr_Source',
lt_attr.utm_campaign AS 'Last_Attr_Campaign',
COUNT(*) AS 'Total'
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

Last_Attr_Source	Last_Attr_Campaign	Total
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

How many last touches is each campaign responsible for?

- Campaign 'weekly-newsletter'' was responsible for 447 last touches through E-mail.
- Campaign 'retargetting-ad' was responsible for 443 last touches through Facebook.
- Campaign 'retargetting-campaign' was responsible for 245 last touches through E-mail.
- Campaign 'getting-to-know-cool-tshirts' was responsible for 232 last touches through The NY Times.
- Campaign 'ten-crazy-cool-tshirts-facts' was responsible for 190 last touches through BuzzFeed.
- Campaign 'interview-with-cool-tshirts-founders' was responsible for 184 last touches through Medium.
- Campaign 'paid-search' was responsible for 178 last touches through Google.
- Campaign 'cool-tshirts-search' was responsible for 60 last touches through Google.

Last Touch Attribution Campaigns

22.6%
22.4%
12.4%
11.7%
9.6%
9.3%
9.0%

- weekly-newsletter
- retargetting-ad
- retargetting-campaign
- getting-to-know-cool-tshirts
- ten-crazy-cool-tshirts-facts
- interview-with-cool-tshirts-founder
- paid-search
- cool-tshirts-search

How many visitors make a purchase?

In total, there were **361 visitors** who ended up making a purchase

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

Purchased_Visitors
361

How many last touches on the *purchase page* is each campaign responsible for?

A total of **361 last touches** on the **purchase page were** attributed to these campaigns, which led to **361 conversions**.

```sql
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),
lt_attr AS (
SELECT lt.user_id,
lt.last_touch_at,
pv.utm_source,
pv.utm_campaign,
pv.page_name
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_source AS 'Last_Attr_Source',
lt_attr.utm_campaign AS 'Last_Attr_Campaign',
COUNT(*) AS 'Total'
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

Last_Attr_Source	Last_Attr_Campaign	Total
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

% of Last Touch Campaigns that Led to Purchase
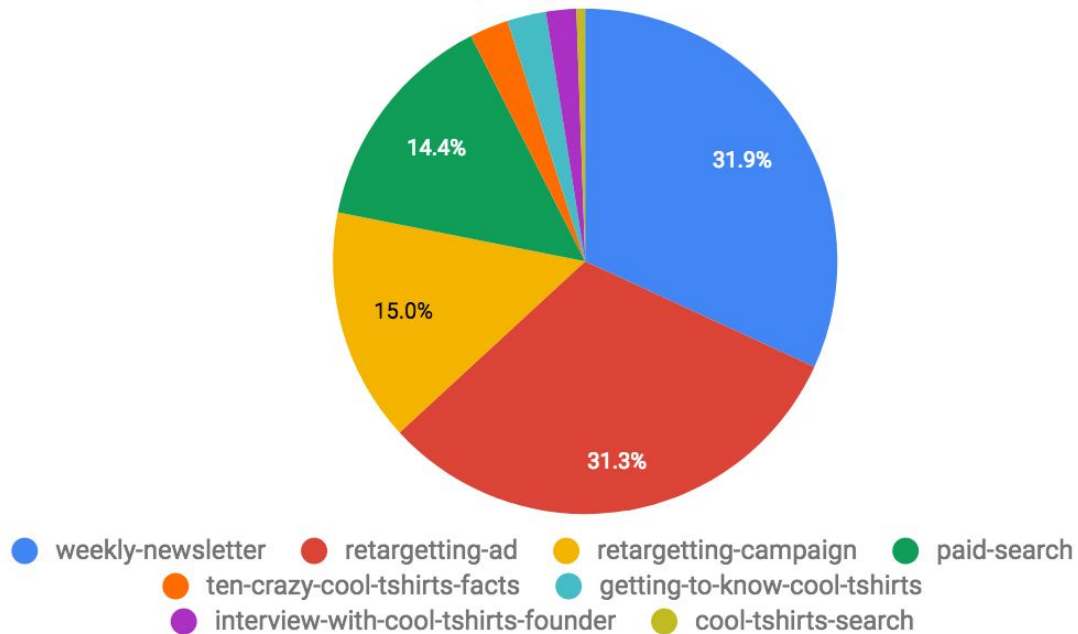
Insights & Campaign Optimization

Top 5 Campaigns to Re-Invest in

1. **Weekly-newsletter** email campaign → led to **115 conversions**
2. **Retargetting-ad** on Facebook → led to **113 conversions**
3. **Retargetting-campaign** through email → led to **54 conversions**
4. **Paid-search** campaign on Google → led to **52 conversions**
5. **Ten-crazy-cool-tshirts-facts campaign** on BuzzFeed → led to **9 conversions**