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1. Gettting to know CoolTshirts

1.1 CoolTshirts current summary

- Running 8 separate campaigns: see column "Campaign Name" below.
  - Each campaign indicates a separate ad or email blast message format for example
- Leveraging 6 sources to run these campaigns: see column "Source Name" below.
  - Each source represents a different point of user interaction with a campaign. For example, a user could be the target of 2 different campaigns via an email source, but only interact with one of them.

Campaign Count	
8	
Source Count	
6	
Campaign Name	**Source Name**
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

1.2 Campaign and Source intersection

- At this time, Google and Email together account for half of CoolTshirts campaign placements
- Targeted campaigns are also leveraged via:
  - NyTimes
  - Medium
  - Facebook
  - Buzzfeed

Campaign Name	Source Name
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

```sql
SELECT COUNT(DISTINCT
utm_campaign) as 'Campaign
Count'
FROM page_visits;
SELECT COUNT(DISTINCT
utm_source) as 'Source Count'
FROM page_visits;
SELECT DISTINCT utm_campaign as
'Campaign Name', utm_source as
'Source Name'
from page_visits;
```

1.3 Page Names

- CoolTshirts has four distinct pages on their website:

Page Name
1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase

```
SELECT DISTINCT page_name as
'Page Name'
from page_visits;
```

2. The User Journey

2.1 First and Last Touch Attribution Queries

- First and last touches determined via queries below; on the next slide, results are combined for easier display and to allow additional comparisons

First touch query:

```
WITH first_touch AS (
    SELECT user_id,
        MIN(timestamp) as first_touch_at
    FROM page_visits
    GROUP BY user_id),
ft_attrib 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_attrib.utm_source,
    ft_attrib.utm_campaign,
        COUNT(*)
FROM ft_attrib
GROUP BY 2
ORDER BY 3 DESC;
```

Last touch query:

```
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 1, 2
ORDER BY 3 DESC;
```
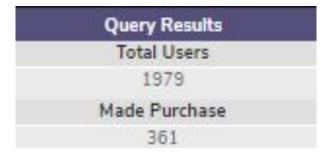
2.1 First and Last Touch Attribution

- First and last touches can be attributed as outlined in table below
-

SOURCE	CAMPAIGN	FIRST TOUCHES	LAST TOUCHES
Buzzfeed	ten-crazy-cool-tshirts-facts	576	190
Email	weekly-newsletter	0	447
Email	retargetting-campaign	0	245
Facebook	retargetting-ad	0	443
Google	cool-tshirts-search	169	60
Google	paid-search	0	178
Medium	interview-with-cool-tshirts-founder	622	184
NYTimes	getting-to-know-cool-tshirts	612	232

2.2 Purchasing

- 361 out of a total 1979 users made a purchase based on the available dataset

Query Results
Total Users
1979
Made Purchase
361

```
SELECT COUNT(DISTINCT user_id) as
'Total Users'
FROM page_visits;
SELECT COUNT(DISTINCT user_id) as
'Made Purchase'
  FROM page_visits
  WHERE page_name = '4 - purchase'
;
```

2.3 Purchasing

- For those 361 users that completed a purchase, last touch attribution from the purchase page is outlined by source and campaign below

Source	Campaign	Total last touch attributions from purchase page
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

3. Campaign Budget Recommendations

3.1 Campaign Budget Recommendation

Based on data reviewed so far, it is recommended that these 5 campaigns continue to be funded:

1. "Weekly-newsletter" via Email source
   a. Accounted for ~32% of purchasing users
2. "retargetting-campaign" via Email source
   a. Accounted for ~15% of purchasing users
3. "Paid-search" via Google source
   a. Accounted for ~14% of purchasing users
4. "Retargetting-ad" via Facebook source
   a. Accounted for ~31% of purchasing users
5. "Getting-to-know-cool-tshirts" via NyTimes source
   a. Accounted for ~9% of purchasing users
   b. On this value alone had similar outcome to the "ten-crazy-cool-tshirts-facts" campaign via buzzfeed, but the campaign via nytimes had a larger number of first and last touch attributions when compared to the buzzfeed campaign
      i. In particular, since the last touch attributions are higher, this would suggest this campaign has more potential to lead to more purchases