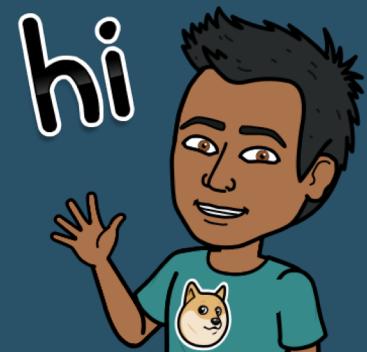




# Attribution Queries – CoolTShirts Case Study

Learn SQL from Scratch  
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20 May 2019



# Table of Contents

1. Get familiar with CoolTShirts
2. What is the user journey?
3. Optimize the campaign budget



# CoolITShirts

CoolITShirts, is an innovative apparel shop. It is running a bunch of marketing campaigns in order to entice users to check out their site and to ultimately go through with a purchase.



# Campaigns & Sources

How many campaigns and sources does CoolTShirts use?

- CoolTshirts uses 8 campaigns from 6 sources.

Which source is used for each campaign?

- The sources used for each campaign are the NY Times, Email, Buzzfeed, Facebook, Medium and Google.

Difference between utm\_source and utm\_campaign?

- utm\_source is where the user came from before being brought to the CoolTShirts site. A utm\_campaign is the mode of communication that is broadcasted to users to display how and what CoolTshirts is promoting.

COUNT(DISTINCT utm_campaign)	
8	
COUNT(DISTINCT utm_source)	
utm_campaign	utm_source
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



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

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

```
SELECT COUNT(DISTINCT utm_source)
      FROM page_visits;
```

```
SELECT DISTINCT utm_campaign,
                  utm_source
            FROM page_visits;
```

# Pages on the CoolTShirts Website

What pages are on the CoolTShirts website?

- The pages that are on the CoolTShirts Website are: landing page, shopping cart, checkout, and purchase.

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

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

--What pages are on the CoolTShirts website?--

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



# User Journey

A user journey is the experience a customer has on any given platform to perform an ultimate goal. In our case study, we examine how a user interacts and navigates the CoolTShirts website in various ways all the way from first landing to checkout.





# First Touch

How many first touches is each campaign responsible for?

- First touch indicates the first time the user was exposed to the site and which landing page. The query pulls up the minimum value and sets it as the first touch time.
- Please see chart below and ran query result to the right for the first touch counts.

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

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

--How many first touches is each campaign responsible for?--

```
WITH first_touch AS (
    SELECT user_id
    ,MIN(timestamp) AS 'first_touch_time'
    FROM page_visits
    GROUP BY user_id),

ft_count AS (
    SELECT ft.user_id
        ,ft.first_touch_time
        ,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_time = pv.timestamp
)

SELECT ft_count.utm_source AS 'source'
    ,ft_count.utm_campaign AS 'campaign'
    ,COUNT (*) AS 'count'
    FROM ft_count
    GROUP BY 1,2
    ORDER BY 3 DESC;
```

# Last Touch

How many last touches is each campaign responsible for?

- Last touch indicates is the last/max time the user was spent on the site. The query pulls up the maximum value and sets it as the last touch time.
- Please see the chart below or the ran query result to the right for the last touch counts.

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	160

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

--How many last touches is each campaign responsible for?-

```

WITH last_touch AS (
    SELECT user_id,
    MAX(timestamp) AS 'last_touch_time'
    FROM page_visits
    GROUP BY user_id),

lt_count AS (
    SELECT lt.user_id,
        lt.last_touch_time,
        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_time = pv.timestamp
)

SELECT lt_count.utm_source AS 'source',
    lt_count.utm_campaign AS 'campaign',
    COUNT (*) AS 'count'
    FROM lt_count
    GROUP BY 1,2
    ORDER BY 3 DESC;

```

# Purchases

How many visitors make a purchase?

- 361 visitors made purchases

COUNT(*)
361

--How many visitors make a purchase?--

```
SELECT DISTINCT COUNT(*)
  FROM page_visits
 WHERE page_name = '4 - purchase';
```

COUNT(*)
361



# Last Touch Users Who Made Purchases

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

- Please see chart below or the ran query result to the right.



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

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

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

```
WITH last_touch AS (
  SELECT user_id,
    MAX(timestamp) AS 'last_touch_time'
  FROM page_visits
  WHERE page_name = '4 - purchase'
  GROUP BY user_id),

lt_count AS (
  SELECT lt.user_id,
    lt.last_touch_time,
    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_time = pv.timestamp
)

SELECT lt_count.utm_source AS 'source',
  lt_count.utm_campaign AS 'campaign',
  COUNT (*) AS 'count'
  FROM lt_count
  GROUP BY 1,2
  ORDER BY 3 DESC;
```

# Optimizing the campaign budget



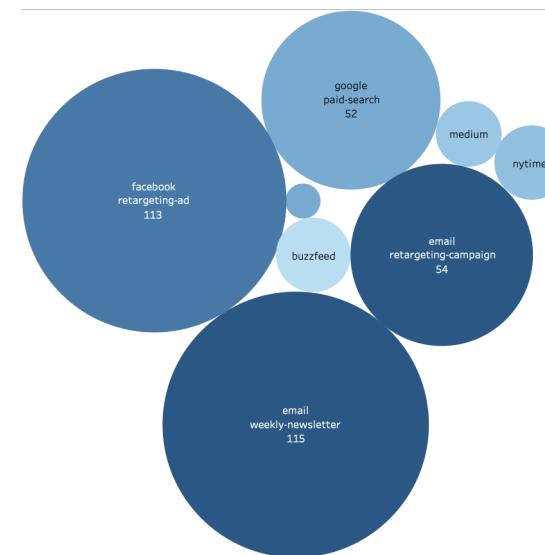
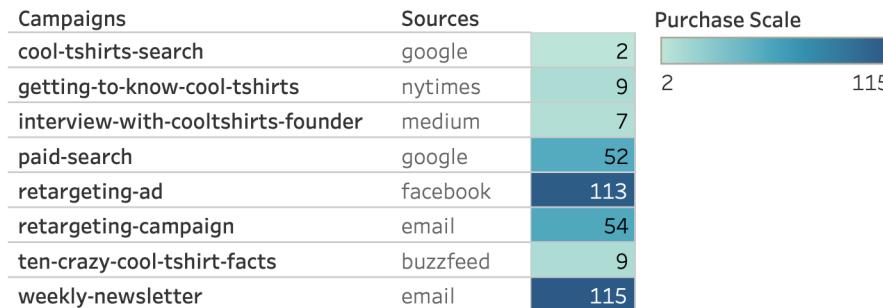
CoolTShirts can reinvest on 5 campaigns. Based on the data we pulled from the SQL queries, we can determine which campaigns will benefit the business.



# Optimizing Campaign Budget



Upon looking at the data we pulled from the queries, CoolTShirts wants to find the most cost effective campaigns, and sources that generate the largest return on investments. The campaigns that work best in promoting sales are: weekly newsletters (email), retargeting ad (Facebook), retargeting campaigns (email), and paid search (Google). Other avenues to which we can seek to expanding and refining are sources in the New York Times and in Buzzfeed as those are high volume visited sites.



# Thank You!

