

# CoolTshirts

Learn SQL from Scratch

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I. Get familiar with CoolTshirts



# I. Get familiar with CoolTshirts

How many campaigns and sources does CoolTshirts use and how are they related?

The data shows that CoolTshirts used 8 campaigns and 6 sources to share the campaigns with the customers.

A source is the type of communication which is used to share the campaign with possible customers. In this case they used email and sites of the New York Times, BuzzFeed, Facebook and Google.

A campaign is a message designed to persuade people to buy a product from in this case CoolTshirts.

Different campaigns use different sources to target different potential customers. For instance, email is used to target old customers and Nytimes is used to target potential new customers.

campaign count	Source count
8	6

Campaign	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

```
1  /* assignment one: How many campaigns and sources does
   CoolTshirts use? Which source is used for each campaign?
   */
2
3  /* First Query shows the number of distinct campaigns */
4
5  SELECT COUNT(distinct utm_campaign) as 'campaign count'
6  FROM page_visits;
7
8  /* second Query shows the number of distinct sources */
9
10 SELECT COUNT(distinct utm_source) as 'Source count'
11 FROM page_visits;
12
13 /* last Query shows the relationship between utm_campaign
   and utm_source */
14
15 SELECT distinct utm_campaign as 'Campaign',
16                utm_source as 'Source'
17 FROM page_visits;
```



# I. Get familiar with CoolTshirts

## What pages are on their website

The table shows that there are four pages that are registered in the data.

CoolTshirts website probably has more pages, like product pages and search results pages.

The data only shows the pages that are relevant for the user journey in terms of conversion.

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

```
1  /* assignment two: What pages are on their website? */  
2  SELECT DISTINCT page_name  
3  FROM page_visits;
```

2. What is the user journey?



## 2. What is the user journey?

How many first touches is each campaign responsible for?

By selecting the MIN timestamp for each user it is possible to find out which campaign and source is responsible to persuade people to visit CoolTshirts for the first time.

Judging by the titles of the campaigns that are responsible for first touches you find what you would expect. The campaigns through Facebook and email target potential customers that visited CoolTshirts before so they don't show up as a result out of this query.

Interesting thing is that the "paid search" doesn't show up in the 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

```
1  /* assignment three: How first touches is each campaign responsible for? */
2
3  /* Temp table that selects first timestamp per user ID */
4  WITH first_touch AS (
5      SELECT user_id,
6             MIN(timestamp) as first_touch_at
7      FROM page_visits
8      GROUP BY user_id),
9  /* ft_attr ads source and campaign to first_touch
10 Joins on user ID and first touch - timestamp */
11 ft_attr AS (
12     SELECT ft.user_id,
13            ft.first_touch_at,
14            pv.utm_source,
15            pv.utm_campaign
16     FROM first_touch ft
17     JOIN page_visits pv
18         ON ft.user_id = pv.user_id
19         AND ft.first_touch_at = pv.timestamp
20 )
21 /* select and counts rows where first touch is associated
22 with source and campaign */
23 SELECT ft_attr.utm_source AS 'Source',
24        ft_attr.utm_campaign AS 'Campaign',
25        COUNT(*)
26 FROM ft_attr
27 GROUP BY 2
28 ORDER BY 3 DESC;
```



## 2. What is the user journey?

How many last touches is each campaign responsible for?

By selecting the MAX timestamp for each user it is possible to find out which campaign and source is responsible for persuading people to visit CoolTshirts the last time.

The results show that all eight campaigns are responsible for last visits.

It looks like the campaigns through email and Facebook succeed to persuade potential customers back to CoolTshirts.

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  /* assignment four: How many last touches is each campaign responsible for?
2  */
3
4  /* Temp table that selects last timestamp per user ID*/
5  WITH last_touch AS (
6      SELECT user_id,
7             MAX(timestamp) as last_touch_at
8      FROM page_visits
9      GROUP BY user_id),
10     /* ft_attr adds source and campaign to last_touch
11     Joins on user ID and last touch - timestamp */
12     lt_attr AS (
13         SELECT lt.user_id,
14                lt.last_touch_at,
15                pv.utm_source,
16                pv.utm_campaign
17         FROM last_touch lt
18         JOIN page_visits pv
19         ON lt.user_id = pv.user_id
20         AND lt.last_touch_at = pv.timestamp
21     )
22     /* select and counts rows where last touch is associated
23     with source and campaign*/
24     SELECT lt_attr.utm_source AS 'Source',
25            lt_attr.utm_campaign AS 'Campaign',
26            COUNT(*)
27     FROM lt_attr
28     GROUP BY 2
29     ORDER BY 3 DESC;
```





## 2. What is the user journey?

### How many visitors make a purchase

361 users make a purchase. By selecting all the pages with the query we can calculate the conversion rate and we can see visitors visited each page. The conversion rate from landing page to purchase is  $361/1.979 * 100 = 18,24\%$ .

page_name	Number users that purchase
4 - purchase	361

page_name	Number of users who visit page
1 - landing_page	1979
2 - shopping_cart	1881
3 - checkout	1431
4 - purchase	361

```
1  /* assignment five: How many visitors make a purchase? */
2
3  /* counts visitors who made a purchase */
4
5  SELECT page_name,
6         COUNT (DISTINCT user_id) AS 'Number users that purchase'
7  FROM page_visits
8  WHERE page_name = '4 - purchase';
9
10 /* query to count users that visited each page */
11 SELECT page_name,
12        COUNT (DISTINCT user_id) AS 'Number of users who visit page'
13 FROM page_visits
14 GROUP BY 1;
```



## 2. What is the user journey?

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

By adding a where clause to the previous query that selects the MAX timestamps where page\_name was '4- purchase' we are able to see which campaign is responsible for turning a visitor into a buyer.

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

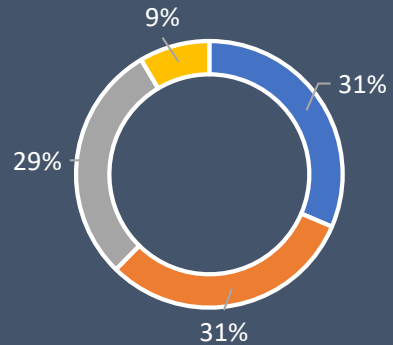
```
1  /* assignment six: How many last touches on the purchase page is each
2     campaign responsible for? */
3
4  /* Temp table that selects last timestamp per user ID */
5  WITH last_touch AS (
6      SELECT user_id,
7             MAX(timestamp) as last_touch_at
8      FROM page_visits
9      /* adds a 'where' clause */
10     WHERE page_name = '4 - purchase'
11     GROUP BY user_id,
12
13     /* ft_attr adds source and campaign to last_touch
14     Joins on user ID and last touch - timestamp */
15     lt_attr AS (
16         SELECT lt.user_id,
17                lt.last_touch_at,
18                pv.utm_source,
19                pv.utm_campaign
20         FROM last_touch lt
21         JOIN page_visits pv
22         ON lt.user_id = pv.user_id
23         AND lt.last_touch_at = pv.timestamp
24     )
25     /* select and counts rows where last touch is associated
26     with source and campaign */
27     SELECT lt_attr.utm_source AS 'Source',
28            lt_attr.utm_campaign AS 'Campaign',
29            COUNT(*)
30     FROM lt_attr
31     GROUP BY 2
32     ORDER BY 3 DESC;
```

## 2. Typical user journey?

### First touch



#### First touch by campaign

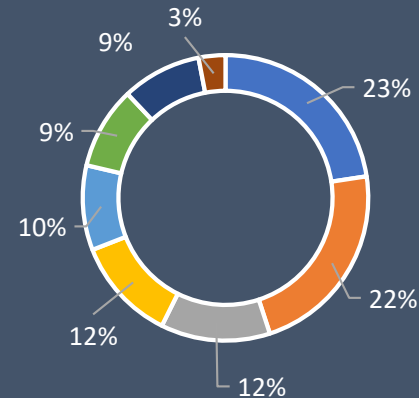


The 3 campaigns that aim on getting to know CoolTshirts are responsible for 91% of all first touches.

This shows us that 'story' campaigns are very effective to drag people to CoolTshirts for the first time.

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

### Who stays?/last touches



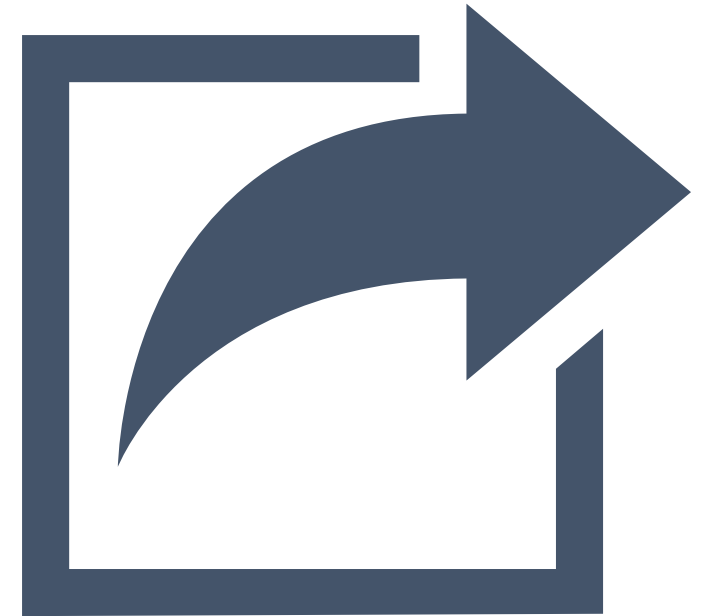
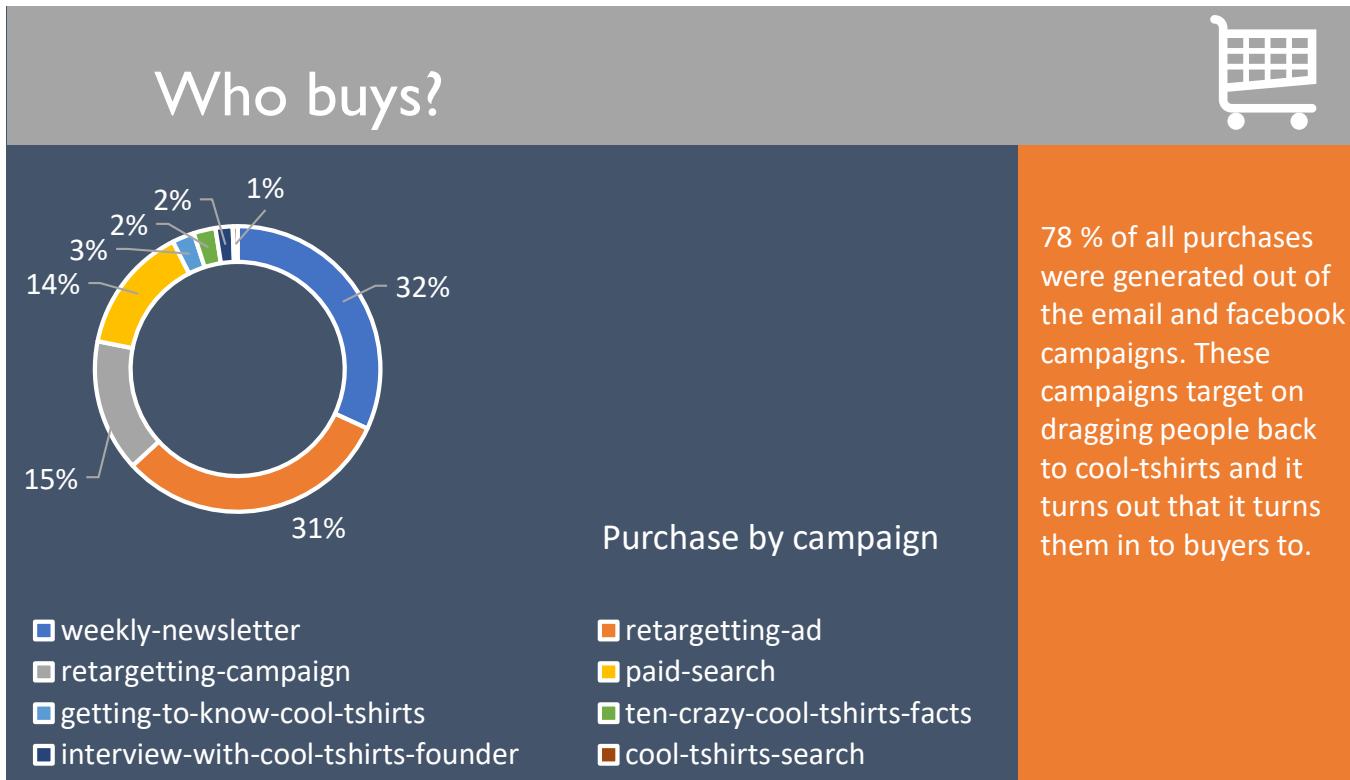
#### First touch by campaign

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

The 2 email campaigns and facebook campaign are responsible for 67% of all last touches. The campaigns that are responsible for the majority of first touches are less represented for the last touches.

We need additional campaigns to persuade people to stay and buy.

## 2. Typical user journey?



### 3. Re-investment

# 3. Re-investment

In wich 5 campaigns should CoolTshirts re-invest?

It is important to re-invest in a minimum of two 'story' campaigns. Grades show that they are great for dragging people to CoolTshirts.

If you want to turn these visitors in to buyers it is important to re-invest in the two email campaigns and the retargeting ads.

The search campaigns are least effective so re-investment in these campaigns would be a waste of resources.

Campaign	First touch%	Last touch%	Purcases%
Interview with cooltshirt founder	31	9	2
Getting to know cool-tshirts	31	12	3
Ten crazy cooltshirts facts	29	10	2
Weekly newsetter	0	23	32
Retargeting campaign	0	12	15
Retargeting ad	0	22	31
Cooltshirt search	9	3	1
Paid search	0	9	14

# 3. Re-investment

## Some extra advise

It would be wise to invest in a campaign on the website of CoolTshirts that persuades people to give their email address. The data shows that the two email campaigns generate 47% of all purchases.

Judging by the success of the retargeting ad I would advise to publish this ad on the websites that dragged people to CoolTshirt the first time namely the New York Times, BuzzFeed and Medium. This could work great to keep people connected and turn them into buyers.

Campaign	First touch%	Last touch%	Purchases%
Interview with cooltshirt founder	31	9	2
Getting to know cool-tshirts	31	12	3
Ten crazy cooltshirts facts	29	10	2
Weekly newsletter	0	23	32
Retargeting campaign	0	12	15
Retargeting ad	0	22	31
Cooltshirt search	9	3	1
Paid search	0	9	14

