codecademy

# Attribution Queries

## Analyze Data with SQL

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# Introduction

CoolTShirts, an innovative apparel shop, is running a bunch of marketing campaigns. In this project, the aim is to help them by answer these questions about their campaigns:

**1. Get familiar with the company.**

- How many campaigns and sources does CoolTShirts use and how are they related?
- What pages are on their website?

**2. What is the user journey?**

- How many first touches is each campaign responsible for?
- How many last touches is each campaign responsible for?
- How many visitors make a purchase?
- How many last touches on the purchase page is each campaign responsible for?
- What is the typical user journey?

**3. Optimize the campaign budget.**

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

***The company CoolTShirts is imaginary and the data is taken from Codecademy. SQLite, Tableau and Excel have been used for the analysis.***

# Get familiar with CoolTShirts

- ***UTM source*** answers the question “Where is the traffic coming from to the website?”
- ***UTM campaign*** answers the question “Why is the traffic coming to the website?”
- There are 8 different campaigns set in 6 different sources in the data table.
- There are four different page names :

1. landing_page 2.shopping_cart
3. checkout 4. purchase

| 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 |

```
/* in order to see the coloumn names from the table */

SELECT *
FROM page_visits
LIMIT 10;

/* number of campaigns and sources CoolTShirts are used */

SELECT COUNT(DISTINCT utm_campaign) AS number_of_campaigns
FROM page_visits ;

SELECT COUNT(DISTINCT utm_source) AS number_of_sources
  FROM page_visits;

/* Relation of sources and campaigns */

  SELECT DISTINCT utm_campaign, utm_source
  FROM page_visits ;

/* distinct values of page_name column */

SELECT DISTINCT page_name
FROM page_visits;
```

# About the User Journey

- It is visible that **interview with cool t-shirts founder** campaign brings the most traffic to the website for the first time.
- The campaign that makes people to last touch is **weekly newsletter**.

| utm_campaign | number_of_first_touches |
|---|---|
| interview-with-cool-tshirts-founder | 622 |
| getting-to-know-cool-tshirts | 612 |
| ten-crazy-cool-tshirts-facts | 576 |
| cool-tshirts-search | 169 |

| utm_campaign | number_of_last_touches |
|---|---|
| weekly-newsletter | 447 |
| retargetting-ad | 443 |
| retargetting-campaign | 245 |
| getting-to-know-cool-tshirts | 232 |
| ten-crazy-cool-tshirts-facts | 190 |
| interview-with-cool-tshirts-founder | 184 |
| paid-search | 178 |
| cool-tshirts-search | 60 |

```
/* number of first touches that each campaign is
responsible for */

SELECT utm_campaign, COUNT(first_touch) AS
number_of_first_touches
FROM (SELECT MIN(timestamp) AS
first_touch,user_id, utm_campaign
FROM page_visits
GROUP BY user_id)
GROUP BY utm_campaign
ORDER BY 2 DESC;


/* number of last touches that each campaign is
responsible for */

SELECT utm_campaign, COUNT(last_touch) AS
number_of_last_touches
FROM (SELECT MAX(timestamp) AS last_touch,
user_id, utm_campaign
FROM page_visits
GROUP BY user_id)
GROUP BY utm_campaign
ORDER BY 2 DESC ;
```

# About the User Journey

- Number of visitors who make a  purchase is 361.
- Number of last touch from weekly newsletter is 447.  114 of them make a purchase. The other users who make a purchase come from retargetting ad, retargetting campaign and paid search.

| number_of_visitors | page_name |
|---|---|
| 361 | 4 - purchase |

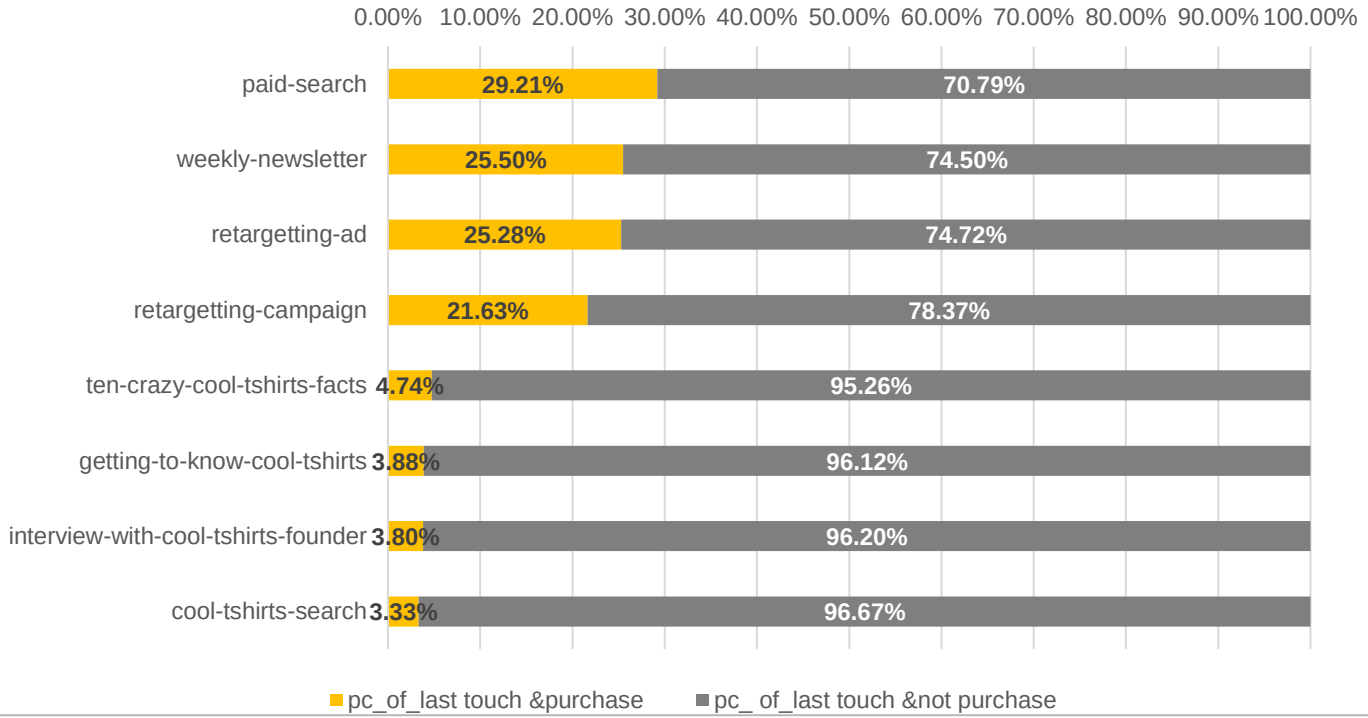
| number_of_last_touches | utm_campaign | page_name |
|---|---|---|
| 114 | weekly-newsletter | 4 - purchase |
| 112 | retargetting-ad | 4 - purchase |
| 53 | retargetting-campaign | 4 - purchase |
| 52 | paid-search | 4 - purchase |
| 9 | ten-crazy-cool-tshirts-facts | 4 - purchase |
| 9 | getting-to-know-cool-tshirts | 4 - purchase |
| 7 | interview-with-cool-tshirts-founder | 4 - purchase |
| 2 | cool-tshirts-search | 4 - purchase |

```
/* number of distinct users make a purchase */

SELECT COUNT(DISTINCT user_id) AS number_of_visitors,
page_name
FROM page_visits
WHERE page_name = '4 - purchase';

/* number of last touches on the purchase page that each
campaign responsible for */

SELECT COUNT(last_touch) AS number_of_last_touches,
utm_campaign,page_name
FROM (SELECT MAX(timestamp) AS last_touch,
user_id,utm_campaign, page_name
FROM page_visits
GROUP BY user_id)
WHERE page_name = '4 - purchase'
GROUP BY utm_campaign
ORDER BY 1 DESC;
```

# Optimize The Campaign Budget

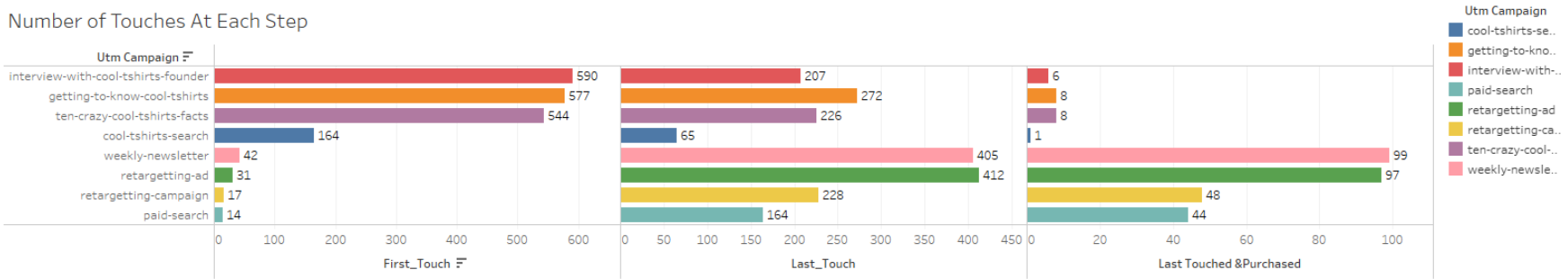
- The CoolTShirts can re-invest in 5 campaigns. According *last touch attribution*, the most successful 5 campaigns are :

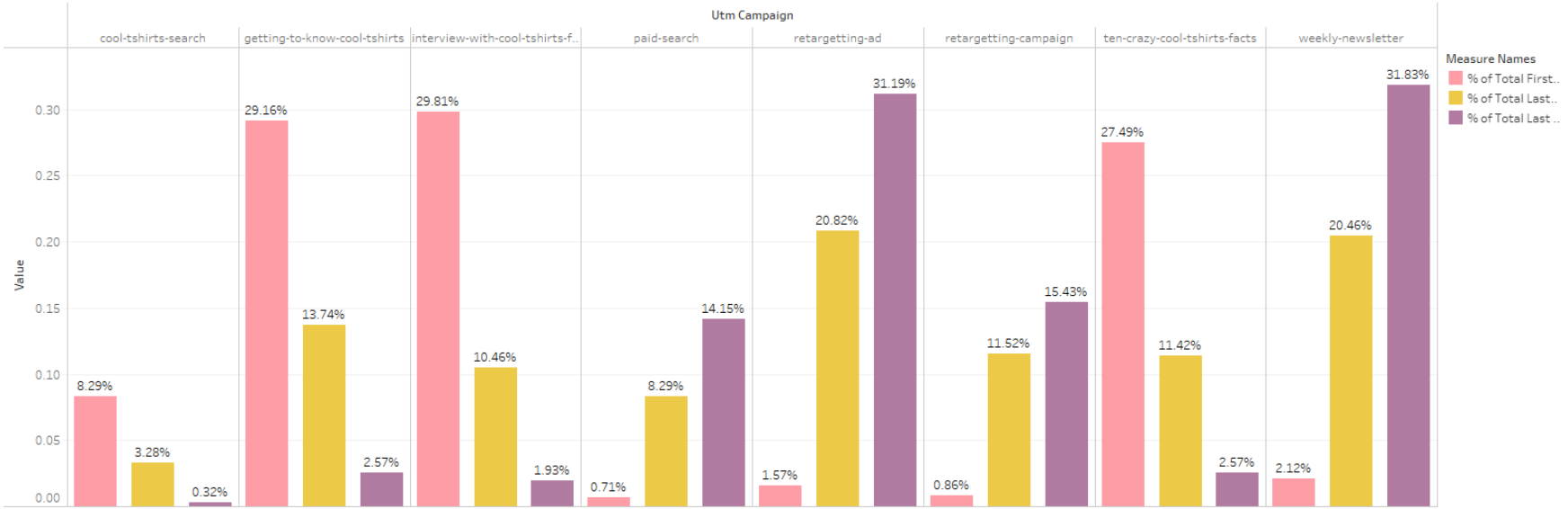
1. Paid Search
2. Weekly Newsletter
3. Retargetting-Ad
4. Retargetting-Campaign
5. Ten Crazy Cool Tshirts Facts



# Dashboard

## Number of Touches At Each Step




## Percentage of Each Step