



Marketing attribution project

Analyze Data with SQL

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1. Project Introduction

Dataset page_visits contains info about marketing campaigns of a company that sells t-shirts.

page_name	timestamp	user_id	utm_campaign	utm_source
1 - landing_page	2018-01-24 03:12:16	10006	getting-to-know-cool-tshirts	nytimes
2 - shopping_cart	2018-01-24 04:04:16	10006	getting-to-know-cool-tshirts	Nytimes
3 - checkout	2018-01-25 23:10:16	10006	weekly-newsletter	email
1 - landing_page	2018-01-25 20:32:02	10030	ten-crazy-cool-tshirts-facts	buzzfeed
2 - shopping_cart	2018-01-25 23:05:02	10030	ten-crazy-cool-tshirts-facts	buzzfeed

```
SELECT *  
FROM page_visits  
LIMIT 5;
```

The goal of this project is to analyse impact of these campaigns and provide recommendations for future marketing activities.

2. Campaign and Source Overview

There are 8 campaigns that were performed through 6 unique sources.
The website consists of 4 pages (funnel stages).

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

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

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

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

3. First Touch Breakdown

Only 4 out of 8 campaigns gained the website some first touches.

utm_campaign	utm_source	first_touches	% of first touches
interview-with-cool-tshirts-founder	medium	622	31.5%
getting-to-know-cool-tshirts	nytimes	612	30.9%
ten-crazy-cool-tshirts-facts	buzzfeed	576	29.1%
cool-tshirts-search	google	169	8.5%

```
WITH first_touch AS (  
  SELECT utm_campaign, utm_source,  
         MIN(timestamp) as first_touch_at  
  FROM page_visits  
  GROUP BY user_id)  
SELECT utm_campaign, utm_source, COUNT(*)  
       AS "first_touches"  
FROM first_touch  
GROUP BY 1  
ORDER BY 3 DESC;
```

3. Purchase Generating Last Touch Breakdown

All 8 sources were involved in generation of last touches that led to purchase.

utm_campaign	utm_source	last_touches	% of last touches
weekly-newsletter	email	115	31.9%
retargetting-ad	facebook	113	31.3%
retargetting-campaign	email	54	15.0%
paid-search	google	52	14.4%
ten-crazy-cool-tshirts-facts	buzzfeed	9	2.5%
getting-to-know-cool-tshirts	nytimes	9	2.5%
interview-with-cool-tshirts-founder	medium	7	1.9%
cool-tshirts-search	google	2	0.6%

```
WITH last_touch AS (  
    SELECT utm_campaign, utm_source,  
           MAX(timestamp) as  
           last_touch_at  
    FROM page_visits  
    WHERE page_name = "4 - purchase"  
    GROUP BY user_id)  
SELECT utm_campaign, utm_source,  
       COUNT(*) AS "last_touches"  
FROM last_touch  
GROUP BY 1  
ORDER BY 3 DESC;
```

4.1 First Touch vs. Last Touch Comparison

Campaigns that brought visitors to the webpage for the first time had very poor conversion rate.

utm_campaign	first_touches	last_touches (with purchase)	conversion rate
interview-with-cool-tshirts-founder	622	7	1.12%
getting-to-know-cool-tshirts	612	9	1.47%
ten-crazy-cool-tshirts-facts	576	9	1.56%
cool-tshirts-search	169	2	1.18%

4.2 First Touch vs. Last Touch Comparison

Follow up campaigns were more successful in converting visits to sales.

- All 4 follow up campaigns combined: **17.09%** conversion rate
- Top 2 follow up campaigns combined: **11.67%** conversion rate

utm_campaign	utm_source	total unconverted first touches*	last_touches (with purchase)	conversion rate
weekly-newsletter	email	1,952	115	5.89%
retargetting-ad	facebook		113	5.78%
retargetting-campaign	email		54	2.76%
paid-search	Google		52	2.66%

* total unconverted first touches = first touches minus last touches (with purchase) from the same source

5. Conclusions

Based on analysed data, the company could improve it's marketing efficiency as follows.

Campaigns for lead generation:

- **Interview with CoolTShirts Founder** on Medium
- **Getting to Know CoolTShirts** ad in the New York Times
- **Ten Crazy CoolTShirts Facts article** in Buzzfeed

Follow up campaigns:

- **Weekly newsletter** send by email
- **Retargeting Ad** on Facebook