



CoolTShirts

Attribution Analysis

Data analysis with SQL
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Introduction

- CoolTShirts sell a wide range of T-shirts. They have recently commenced a range of new marketing campaigns to increase their website visits and purchases
- They would like to use touch attribution to map their customer's journey and optimise their marketing campaign.

Introduction

- The owners would like to investigate the following:
 - 1) What is the user journey?
 - How many first touches does each campaign have?
 - How many last touches does each campaign have?
 - How many visitors make a purchase?
 - How many last touches on the purchase page does each campaign have?
 - 2) Optimisation of the campaign budget
 - Which 5 campaigns should they re-invest in

Getting to know the website

- The CoolTShirts website has 4 pages of interest:
 - landing_page
 - shopping_cart
 - checkout
 - purchase

SQL code

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

Getting to know the campaigns

- CoolTShirts currently have 8 active marketing campaigns across 6 sources
- The table below shows which campaigns are on each platform

Campaign	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

SQL code

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

First touches for each campaign

- Only 4 of the campaigns resulted in a first touch to the website
- Interview_with_cooltshirts_founder and getting_to_know_cool_tshirts were found to be the most effective

Campaign	First_touches
getting_to_know_cool_tshirts	612
weekly_newsletter	-
ten_crazy_cool_tshirts_facts	576
retargeting_campaign	-
retargeting_ad	-
interview_with_cool_tshirts_founder	622
paid_search	-
cool_tshirts_search	169

SQL code

```
WITH first_touch AS(  
    SELECT user_id, MIN(timestamp) AS  
    first_touch_at  
    FROM page_visits  
    GROUP BY user_id),  
first_touch_results AS(  
    SELECT ft.user_id, ft.first_touch_at,  
    pv.utm_campaign  
    FROM first_touch AS 'ft'  
    JOIN page_visits AS 'pv'  
    ON ft.user_id = pv.user_id AND  
    ft.first_touch_at = pv.timestamp)  
SELECT utm_campaign, COUNT(utm_campaign)  
FROM first_touch_results  
GROUP BY 1  
ORDER BY 2;
```

Last touches for each campaign

- All of the campaigns resulted in a last touch to the website
- The weekly_newsletter and retargeting_ad were found to be the most effective

Campaign	Last_touches
getting_to_know_cool_tshirts	232
weekly_newsletter	447
ten_crazy_cool_tshirts_facts	190
retargeting_campaign	245
retargeting_ad	443
interview_with_cool_tshirts_founder	184
paid_search	178
cool_tshirts_search	60

SQL code

```
WITH last_touch AS(  
    SELECT user_id, MAX(timestamp) AS  
    last_touch_at  
    FROM page_visits  
    GROUP BY user_id),  
last_touch_results AS(  
    SELECT lt.user_id, lt.last_touch_at,  
    pv.utm_campaign  
    FROM last_touch AS 'lt'  
    JOIN page_visits AS 'pv'  
    ON lt.user_id = pv.user_id AND  
    lt.last_touch_at = pv.timestamp)  
SELECT utm_campaign, COUNT(utm_campaign)  
FROM last_touch_results  
GROUP BY 1  
ORDER BY 2;
```

Last touches for each campaign - purchased

- 361 users purchased a product from the website
- The weekly_newsletter and retargeting_ad were most successful at getting users to make a purchase

Campaign	Last touches that made a purchase
getting_to_know_cool_tshirts	9
weekly_newsletter	115
ten_crazy_cool_tshirts_facts	9
retargeting_campaign	54
retargeting_ad	113
interview_with_cool_tshirts_founder	7
paid_search	52
cool_tshirts_search	2

SQL code

```
WITH last_touch AS(  
    SELECT user_id, MAX(timestamp) AS  
    last_touch_at  
    FROM page_visits  
    WHERE page_name = '4 - purchase'  
    GROUP BY user_id),  
last_touch_results AS(  
    SELECT lt.user_id, lt.last_touch_at,  
    pv.utm_campaign  
    FROM last_touch AS 'lt'  
    JOIN page_visits AS 'pv'  
    ON lt.user_id = pv.user_id AND  
    lt.last_touch_at = pv.timestamp)  
SELECT utm_campaign, COUNT(utm_campaign)  
FROM last_touch_results  
GROUP BY 1  
ORDER BY 2;
```


First touch led to purchase

- Only 25 of the 361 purchases were made directly from the landing site.
- The majority were therefore made by initially going through the landing site and then being prompted and returning to the website

Campaign	Last touches that made a purchase
getting_to_know_cool_tshirts	8
weekly_newsletter	-
ten_crazy_cool_tshirts_facts	8
retargeting_campaign	-
retargeting_ad	-
interview_with_cool_tshirts_founder	7
paid_search	-
cool_tshirts_search	2

SQL code

```
WITH landings AS(  
  SELECT *  
  FROM page_visits  
  WHERE page_name = '1 - landing_page'),  
purchases AS (  
  SELECT *  
  FROM page_visits  
  WHERE page_name = '4 - purchase'),  
combined AS(  
  SELECT la.timestamp AS first_touch_at,  
  la.user_id, la.utm_campaign AS landing_utm,  
  pu.timestamp AS last_touch_at, pu.utm_campaign  
  AS purchase_utm  
  FROM landings AS 'la'  
  INNER JOIN purchases 'pu'  
  ON la.user_id = pu.user_id)  
SELECT landing_utm, purchase_utm, COUNT(user_id)  
FROM combined  
WHERE landing_utm = purchase_utm  
GROUP BY landing_utm;
```

Conclusions

- Getting_to_know_cool_tshirts, ten_crazy_cool_tshirts_facts and interview_with_cool_tshirts_founder were the most successful at initially directing traffic to the website, however this often didn't result in purchases
- Weekly_newsletter and retargeting_ad resulted in the most last touches and purchases.

Campaign	First_touches	Last_touches	Last_touches that made a purchase	Purchases where first UTM = last UTM
getting_to_know_cool_tshirts	612	232	9	8
weekly_newsletter	-	447	115	
ten_crazy_cool_tshirts_facts	576	190	9	8
retargeting_campaign	-	245	54	
retargeting_ad	-	443	113	
interview_with_cool_tshirts_founder	622	184	7	7
paid_search	-	178	52	
cool_tshirts_search	169	60	2	2

Recommendations

- To initially engage people to the website the company should focus on the following campaigns:
 - getting to know cool tshirts
 - ten crazy cool tshirts facts
 - interview with cool tshirts founder
- It should then focus on the following campaigns to re-engage the customers and encourage them to make purchases
 - weekly newsletter
 - retargeting ad