



# First- And Last-Touch Attribution

## CoolTShirts

Capstone Project – Learn SQL From Scratch

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# THE LOWDOWN

**CoolTShirts** is an innovative apparel shop. Unlike many of its competitors, it uses data to support all business decisions. **CoolTShirts** has invested in many marketing campaigns to drive traffic to its website, and is currently investigating the effectiveness of each campaign to determine future investment.

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- Marketing Campaigns and Sources
- The User Journey
- Campaign Budget Optimization

## 1. Get familiar with the company.

- How many campaigns and sources does CoolTShirts use and how are they related? Be sure to explain the difference between `utm_campaign` and `utm_source`.
- 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?

# MARKETING CAMPAIGNS AND SOURCES

## MARKETING CAMPAIGNS AND SOURCES

- **Marketing Campaign:** *A specific, defined series of activities used in marketing a new or changed product or service, or in using new marketing channels and methods*
- **Marketing Source:** *A communication channel or medium that targets a specific demographic or user group*

Campaign Count	Source Count
8	6

Marketing Campaign	Marketing 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

```
SELECT COUNT(DISTINCT utm_campaign) AS 'Campaign Count'
FROM page_visits;

SELECT COUNT(DISTINCT utm_source) AS 'Source Count'
FROM page_visits;
```

```
SELECT DISTINCT utm_campaign AS 'Marketing Campaign'
FROM page_visits;

SELECT DISTINCT utm_source AS 'Marketing Source'
FROM page_visits;

SELECT DISTINCT utm_campaign AS 'Marketing Campaign',
               utm_source AS 'Marketing Source'
FROM page_visits;
```

# COOLTSHIRTS.COM PAGE NAMES

## PAGE NAMES ON COOLTSHIRTS.COM

There are four (4) pages on CoolTShirts website:

- 1 – Landing Page
- 2 – Shopping Cart
- 3 – Checkout
- 4 – Purchase

Page Names
1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase

```
SELECT DISTINCT page_name AS 'Page Names'  
FROM page_visits;
```

# THE USER JOURNEY

## 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?

```
WITH first_touch AS (  
    SELECT user_id,  
           MIN(timestamp) AS 'first_touch_at'  
    FROM page_visits  
    GROUP BY user_id),  
ft_attr AS (  
    SELECT ft.user_id,  
           ft.first_touch_at,  
           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_at = pv.timestamp  
    )  
SELECT ft_attr.utm_source AS 'First Touch Source',  
       ft_attr.utm_campaign AS 'First Touch Campaign',  
       COUNT(*) AS 'No. of Users'  
FROM ft_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

First Touch Source	First Touch Campaign	No. of Users
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

# THE USER JOURNEY – CONT'D

## 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?

```
WITH last_touch AS (  
    SELECT user_id,  
           MAX(timestamp) AS 'last_touch_at'  
    FROM page_visits  
    GROUP BY user_id),  
lt_attr AS (  
    SELECT lt.user_id,  
           lt.last_touch_at,  
           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_at = pv.timestamp  
    )  
SELECT lt_attr.utm_source AS 'Last Touch Source',  
       lt_attr.utm_campaign AS 'Last Touch Campaign',  
       COUNT(*) AS 'No. of Users'  
FROM lt_attr  
GROUP BY 1, 2  
ORDER BY 3 DESC;
```

Last Touch Source	Last Touch Campaign	No. of Users
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

# THE USER JOURNEY – CONT'D

## 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?**

```
SELECT COUNT(DISTINCT user_id) AS 'Visitors Make Purchase'
FROM page_visits
WHERE page_name = '4 - purchase';
```

```
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),
lt_attr AS (
  SELECT lt.user_id,
         lt.last_touch_at,
         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_at = pv.timestamp
)
SELECT lt_attr.utm_source AS 'Source - Purchase Page',
       lt_attr.utm_campaign AS 'Campaign - Purchase Page',
       COUNT(*) AS 'No. of Users'
FROM lt_attr
GROUP BY 1, 2
ORDER BY 3 DESC;
```

### Visitors Make Purchase

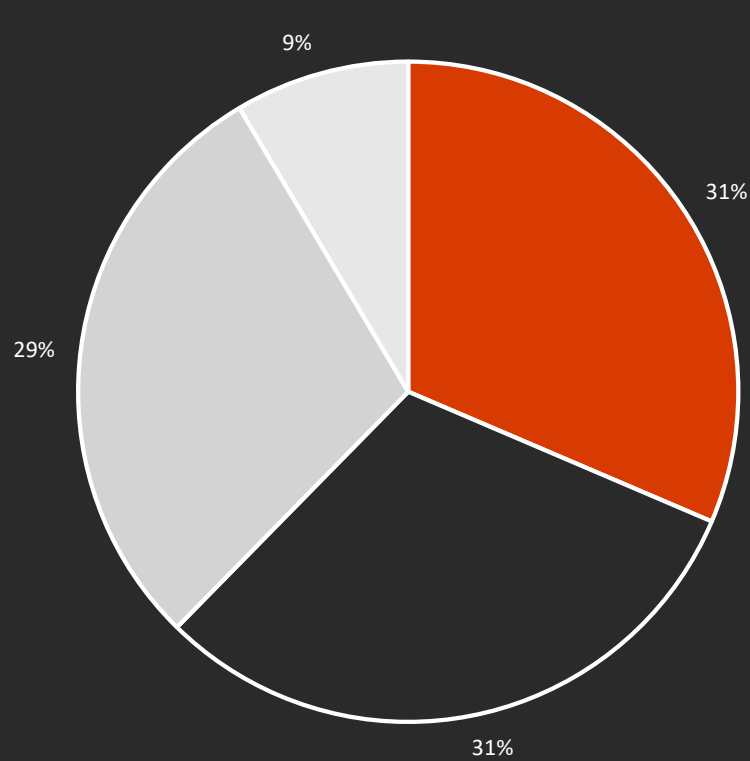
361

Source - Purchase Page	Campaign - Purchase Page	No. of Users
email	weekly-newsletter	115
facebook	retargeting-ad	113
email	retargeting-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

**Conversion Rate: 18.2%**  
(18.2% = 361/1979)

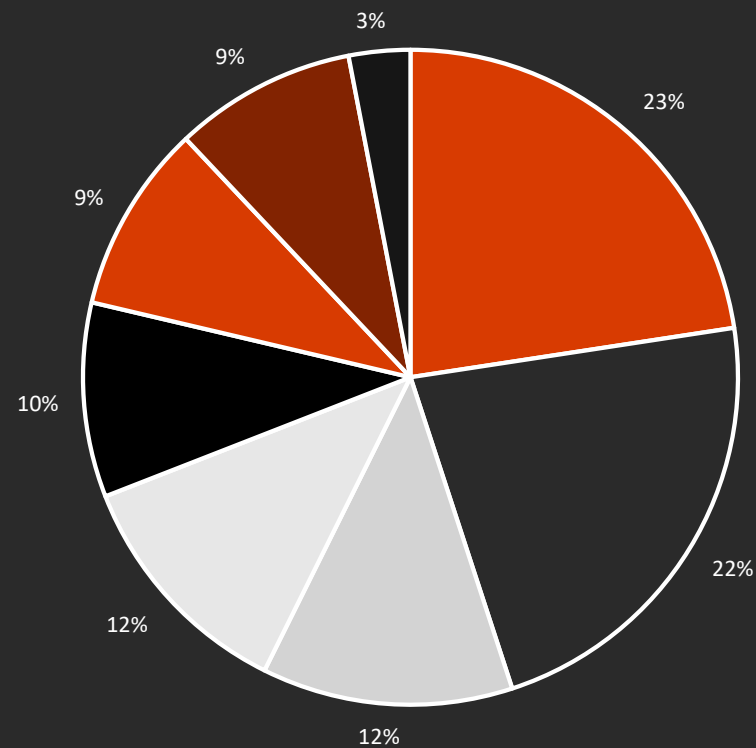


# THE "TYPICAL" USER JOURNEY



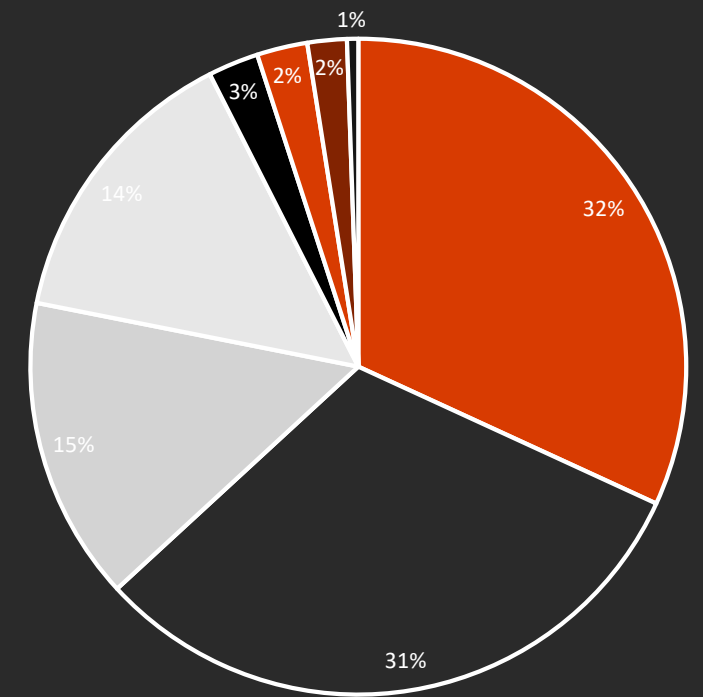
■ Interview-with-cool-tshirts-founder   ■ getting-to-know-cool-tshirts  
■ ten-crazy-cool-tshirts-facts   ■ cool-tshirts-search

FIRST TOUCH BY CAMPAIGN



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

LAST TOUCH BY CAMPAIGN



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

PURCHASES BY CAMPAIGN

# CAMPAIGN BUDGET OPTIMIZATION

## MARKETING CAMPAIGN SUMMARY

CAMPAIGN	First Touch	First Touch - %	Last Touch	Last Touch - %	LT Purchase	LT Purchase - %
weekly-newsletter	N/A	0%	447	23%	115	32%
retargeting-ad	N/A	0%	443	22%	113	31%
retargeting-campaign	N/A	0%	245	12%	54	15%
paid-search	N/A	0%	178	9%	52	14%
ten-crazy-cool-tshirts-facts	576	29%	190	10%	9	2%
getting-to-know-cool-tshirts	612	31%	232	12%	9	2%
interview-with-cool-tshirts-founder	622	31%	184	9%	7	2%
cool-tshirts-search	169	9%	60	3%	2	1%

- Though three campaigns generate a lot of initialize “buzz,” they do not generate sales
  - Interview with CoolTShirts Founder: First Touch – 31% → Purchase – 2%
  - Getting To Know CoolTshirts: First Touch – 31% → Purchase – 2%
  - Ten Crazy Coll T-shirt Facts: First touch – 29% → Purchase – 2%
- Alternatively, other methods account for 92% of sales
  - Weekly Newsletter – 32%
  - Retargeting Ad – 31%
  - Retargeting Campaign – 15%
  - Paid Search – 14%

## MARKETING CAMPAIGN RECOMMENDATION

It is recommended to maintain current investment strategies in the **weekly newsletter** and **retargeting ads** campaigns. Additionally, it is recommended to continue to current investment strategies in the **T-shirt facts** and **getting to know cool T-shirts** campaigns, and additional **interviews with CoolTShirts founder**, albeit follow up effort and investment is required to generate sales conversion.

# THANK YOU!



**Ben Martin**



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