

COOL T-SHIRTS, INC.®

# Marketing Campaign Strategy

Learn SQL from Scratch

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**CONTEXT...**

- November, 2016: Cool T-Shirts, Inc. (CTS) commits to a multi-campaign online marketing strategy in an effort to establish brand loyalty and increase sales.
- December, 2017: CTS conducts an internal analysis to determine the financial impact of their marketing efforts year-to-date.
- March, 2018: Due to unclarified conclusions drawn from the December, 2017 impact analysis, CTS endeavors to fully understand the data provided by their marketing partners.

# Data Schema in a Nutshell

user_id	timestamp	page_name	utm_source	utm_medium	utm_campaign
A unique identifier for each visitor to a page	The time at which the visitor came to the page	The title of the section of the page that was visited	Identifies which site sent the traffic (i.e., google, newsletter, or facebook_ad)	Identifies what type of link was used (i.e., cost-per-click or email)	Identifies the specific ad or email blast (i.e., june-21- newsletter or memorial-day-sale)

**Source unique values include:** nytimes, email, BuzzFeed, facebook, medium, google

**Campaign unique values include:** getting-to-know-cool-tshirts, weekly-newsletter, ten-crazy-cool-tshirts-facts, retargeting-campaign, retargeting-ad, interview-with-cool-tshirts-founder, paid-search, cool-tshirts-search

*\*Data pulled from CTS proprietary databases\**

# Sources & Campaigns as Data Explained

In the context of CTS marketing, sources are simply the platforms through which the company administers their numerous online marketing campaigns. These platforms represent the source of the ads prospective customers see and, hopefully, follow to the CTS website to purchase goods.

- For example, the New York Times is a source through which any number of campaigns administer marketing materials to NYT readers online. Email is another source, however, it is obviously not administered through a specific company.
- CTS utilized six different sources for their eight unique campaigns.
- To the left is the query used to find the total number and names of CTS sources and campaigns.

Query to count distinct sources (6) & campaigns (8)

```
SELECT COUNT(DISTINCT utm_campaign)
FROM page_visits;
```

```
SELECT COUNT(DISTINCT utm_campaign)
FROM page_visits;
```

# Sources & Campaigns Continued

Campaigns depend on sources for the obvious reason that without a source, the campaigns would have no means to reach prospective customers. An interesting introductory exercise was performed to determine the related source for each campaign.

To an extent, however, each campaign can be measured by the number of webpage visits directed through each source. This is well illustrated by the first set of query results pictured to the right. The second query results identify the four different web pages CTS uses to capture the interest of prospective customers.

Query to determine which source is used for each campaign:

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

Results:

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

---

query: What pages are on the CoolTShirts website?

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

RESULTS:

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

**What is the typical user's  
journey?**

# Website Traffic - First Touch Findings

Based on the query logic to the right and the results below, we are able to determine the number of first touches that each campaign and source are able to claim.

Source	Campaign	First Touches
Medium	interview-with-founder	622
Buzzfeed	getting-to-know-cool-tshirts	612
New York Times	ten-crazy-cool-tshirts-facts	576
Google	cool-tshirts-search	169

Query to determine the number of first touches

```
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 ft
             JOIN page_visits pv
              ON ft.user_id = pv.user_id
              AND ft.first_touch_at = pv.timestamp)
```

```
SELECT ft_attr.utm_source,
       ft_attr.utm_campaign,
       COUNT(*)
FROM ft_attr
Group by 1, 2
Order by 3 Desc;
```



# Website Traffic - Last Touch Findings

Likewise, we are able to determine a similar set of conclusions based on the query logic to the right and the results below.

Source	Campaign	Last Touches
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

***Tucked away at the bottom is a short query designed to count the different individuals who made a purchases – 361!***

Query to determine the number of last touches

```
WITH last_touch AS (SELECT user_id,
                          MIN(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 lt
             JOIN page_visits pv
              ON lt.user_id = pv.user_id
              AND lt.last_touch_at = pv.timestamp)
```

```
SELECT lt_attr.utm_source,
       lt_attr.utm_campaign,
       COUNT(*)
FROM lt_attr
Group by 1, 2
Order by 3 Desc;
```

Query to determine the number of first touches

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

**All things constant, we believe that the typical user journey begins while the user is reading online and results in a purchase after a targeted touch via email or Facebook.**

# Website Traffic - Last Touch Findings

We recommend CTS reinvest their FY marketing budget dollars into the five campaigns below in green. While the “ten-crazy-cool...” and “getting-to-know...” campaigns total nearly the same number of combined first and last touches, the “ten-crazy-cool...” campaign produced significantly more first touches, which we believe is a much more valuable in terms of lead generation and potential purchases.

Source	Campaign	Attributable Touches
email	weekly-newsletter	115
facebook	retargetting-ad	113
email	retargetting-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

Query to determine the number of last touch visits on the purchase page that are attributable to each campaign:

```
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 lt
             JOIN page_visits pv
               ON lt.user_id = pv.user_id
               AND lt.last_touch_at = pv.timestamp)
SELECT lt_attr.utm_source,
       lt_attr.utm_campaign,
       COUNT(*)
FROM lt_attr
Group by 1, 2
Order by 3 Desc;
```