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Capstone: Attribution

Learn SQL from Scratch
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Table of Contents

1. Current Campaign Review

1.1 Campaigns and Sources

The table to the right identifies current CoolTShirt Campaigns and their related Sources:

- **Campaigns** - Specific ad or email blasts intended to draw traffic to the CoolTShirts website, and identified in our database as utm_campaign.
- **Sources** - Each campaign has a source that identifies which touchpoint sent the traffic to our CoolTShirts website, noted as utm_source in our database.

Campaign	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

1.2 CoolTShirts website

There are four CoolTShirt website pages that we track in our database.

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

2. The User Journey

1.1 Campaign First Touches

A First Touch is the first time that a potential customer comes to our website.

We provided the SQL statement we used to derive this data to the right.

```sql
WITH first_touch AS (
    SELECT user_id,
        MIN(timestamp) as first_touch_at
    FROM page_visits
    GROUP BY user_id)
SELECT pv.utm_campaign as 'Campaign',
    COUNT(ft.first_touch_at) as 'Count'
FROM first_touch ft
JOIN page_visits pv
    ON ft.user_id = pv.user_id
    AND ft.first_touch_at = pv.timestamp
GROUP BY pv.utm_campaign;
```

Campaign First Touches	
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169

1.1 Campaign Last Touches

A Last Touch is the last time that a potential customer comes to our website, but does not indicate whether the customer made a purchase.

We provided the SQL statement we used to derive this data to the right.

```
WITH last_touch AS (
    SELECT user_id,
        MAX(timestamp) as last_touch_at
    FROM page_visits
    GROUP BY user_id)
SELECT pv.utm_campaign as 'Campaign',
COUNT(lt.last_touch_at) as 'Count'
FROM last_touch lt
JOIN page_visits pv
    ON lt.user_id = pv.user_id
    AND lt.last_touch_at = pv.timestamp
GROUP BY pv.utm_campaign;
```

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

1.1 Last Touch Purchases

This table demonstrates all Last Touches that resulted in the user reaching the purchase page.

We provided the SQL statement we used to derive this data to the right.

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

Last Touch Purchases			
weekly-newsletter	114	getting-to-know-cool-tshirts	9
retargetting-ad	112	ten-crazy-cool-tshirts-facts	9
retargetting-campaign	53	interview-with-cool-tshirts-founder	7
paid-search	52	cool-tshirts-search	2

3. Campaign Optimization

1.1 Campaign Reinvestments

First Touch Reinvestments - CoolTShirts should reinvest in the top 3 First Touches because they act as drivers to the site and their numbers were almost 4 times greater than any of the other campaigns:

- interview-with-cool-tshirts-founder
- getting-to-know-cool-tshirts
- ten-crazy-cool-tshirts-facts

Touch Reinvestments - CoolTShirts should reinvest in the top 2 Last Touches because they not only brought people back to the site, but they also resulted in the most purchases. In each case, their numbers each were almost 4 times greater than any of the other campaigns:

- weekly-newsletter
- retargetting-ad

Campaigns	Top First Touches
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576

Campaigns	Top Last Touches
weekly-newsletter	447
retargetting-ad	443

Campaigns	Top Purchases
weekly-newsletter	114
retargetting-ad	112