Learn SQL from Scratch

Attribution Queries

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Get Familiar with CoolTShirts

Get Familiar with CoolTShirts

How many campaigns and sources does CoolTShirts use?

8 campaigns, 6 sources

Get Familiar with CoolTShirts

Which source is used for each campaign?

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

QUERY

```
SELECT utm_campaign, utm_source
FROM page_visits
GROUP BY 1;
```

Get Familiar with CoolTShirts

What pages are on the CoolTShirts website?

- Landing Page
- Shopping Cart
- Checkout
- Purchase

QUERY

SELECT page_name
FROM page_visits
GROUP BY 1;

What is the User Journey?

What Is the User Journey?

How many first touches is each campaign responsible for?

CAMPAIGN	SOURCE
interview-with-cool-tshirts-founder	622
getting-to-know-cool-tshirts	612
ten-crazy-cool-tshirts-facts	576
cool-tshirts-search	169
paid-search	0
retargetting-ad	0
retargetting-campaign	0
weekly-newsletter	0

QUERY

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

What Is the User Journey?

How many last touches is each campaign responsible for?

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

QUERY

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

What Is the User Journey?

How many visitors make a purchase?

361

QUERY

SELECT COUNT(*)
FROM page_visits
WHERE page_name = '4 - purchase';

What Is the User Journey?

How many last touches on the purchase page is each campaign responsible for?

CAMPAIGN	SOURCE
weekly-newsletter	115
retargetting-ad	113
retargetting-campaign	54
paid-search	52
getting-to-know-cool-tshirts	9
ten-crazy-cool-tshirts-facts	9
interview-with-cool-tshirts-founder	7
cool-tshirts-search	2

QUERY

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

What Is the User Journey?

What is the typical user journey?

ACQUISITION: All customers start their journey with CoolTShirts on the landing page.

PAGE	COUNT
1 - landing_page	1979

QUERY

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

What Is the User Journey?

What is the typical user journey?

ACQUISITION PT 2: The majority of customers begin their CoolTShirts journey with articles from Medium, the NY Times or Buzzfeed.

CAMPAIGN	SOURCE	COUNT
interview-with-cool-tshirts-founder	medium	622
getting-to-know-cool-tshirts	nytimes	612
ten-crazy-cool-tshirts-facts	buzzfeed	576
cool-tshirts-search	google	169

```
WITH first_touch AS (
SELECT
        user_id,
        MIN(timestamp) as first_touch_at
FROM page_visits
GROUP BY 1
)
SELECT
        pv.utm_campaign,
        pv.utm_source,
        COUNT(*)
FROM first_touch as ft
JOIN page_visits as pv
        ON ft.user_id = pv.user_id
        AND ft.first_touch_at = pv.timestamp
GROUP BY 1
ORDER BY 3 DESC;
```

What Is the User Journey?

What is the typical user journey?

CONVERSION: The majority of late-funnel customers go straight to the checkout page. Some are also directed to the shopping cart or the purchase page. Very few return to the landing page.

PAGE	COUNT
3 - checkout	1066
2 - shopping_cart	457
4 - purchase	358
1 - landing_page	98

QUERY

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

What Is the User Journey?

What is the typical user journey?

CONVERSION PT 2: Most customers are re-engaged through the weekly email newsletter or the Facebook retargeting campaign.

CAMPAIGN	SOURCE	COUNT
weekly-newsletter	email	447
retargetting-ad	facebook	443
retargetting-campaign	email	245
getting-to-know-cool-tshirts	nytimes	232
ten-crazy-cool-tshirts-facts	buzzfeed	190
interview-with-cool-tshirts-founder	medium	184
paid-search	google	178
cool-tshirts-search	google	60

QUERY

```
WITH last_touch AS (
SELECT
        user_id,
        MAX(timestamp) as last_touch_at
FROM page_visits
GROUP BY 1
)
SELECT
        pv.utm_campaign,
        pv.utm_source,
        COUNT(*)
FROM last_touch as lt
JOIN page_visits as pv
        ON lt.user_id = pv.user_id
        AND lt.last_touch_at = pv.timestamp
GROUP BY 1
ORDER BY 4 DESC;
```

What Is the User Journey?

What is the typical user journey?

CONVERSION PT 3: The three highest performing last-touch campaigns primarily send customers to the checkout page, with 21-26% of those customers proceeding to purchase.

PAGE	CAMPAIGN	COUNT	CONVERSION
3 - checkout	weekly-newsletter	333	
4 - purchase	weekly-newsletter	114	25.5%
3 - checkout	retargetting-ad	331	
4 - purchase	retargetting-ad	112	25.3%
3 - checkout	retargetting-campaign	192	
4 - purchase	retargetting-campaign	53	21.6%

QUERY* (Rewritten for each campaign)

```
WITH last_touch AS (
SELECT
        user_id,
        MAX(timestamp) as last_touch_at
FROM page_visits
GROUP BY 1
)
SELECT
        pv.page_name,
        pv.utm_campaign,
        COUNT(*)
FROM last_touch as lt
JOIN page_visits as pv
        ON lt.user_id = pv.user_id
        AND lt.last_touch_at = pv.timestamp
WHERE pv.utm_campaign =
'retargetting-campaign'
GROUP BY 1
ORDER BY 3 DESC;
```

What Is the User Journey?

What is the typical user journey?

CONVERSION PT 4: The greatest drop off in the customer journey is from the checkout to the purchase page.

PAGE	COUNT
1 - landing_page	2000
2 - shopping_cart	1900
3 - checkout	1431
4 - purchase	361

QUERY
SELECT page_name, COUNT(*) FROM page_visits GROUP BY 1 ORDER BY 2 DESC;

What Is the User Journey?

What is the typical user journey?

CONVERSION PT 5: Most customers navigating to the purchase page come from the weekly email newsletter or the Facebook retargeting campaign.

CAMPAIGN	SOURCE	COUNT
weekly-newsletter	email	115
retargetting-ad	facebook	113
retargetting-campaign	email	54
paid-search	google	52
getting-to-know-cool-tshirts	nytimes	9
ten-crazy-cool-tshirts-facts	buzzfeed	9
interview-with-cool-tshirts-founder	medium	7
cool-tshirts-search	google	2

QUERY
SELECT utm_campaign, utm_source, COUNT(*) FROM page_visits WHERE page_name = '4 - purchase' GROUP BY 1 ORDER BY 3 DESC;

Optimize the Campaign Budget

What Is the User Journey?

CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?

A successful marketing program gives equal consideration to all stages of the customer funnel, not just last-touch campaigns that have the clearest link to their bottom line. Prioritizing campaigns that drive high numbers of last-touches without also investing in acquisition campaigns makes it difficult for brands to engage new customer bases and build brand relationships that then, through conversion campaigns, result in purchases - and repeat purchases. With that in mind, CoolTShirts should balance their marketing investments:

Acquisition campaigns

1. Interview-with-cool-tshirts-founder
2. Getting-to-know-cool-tshirts

Conversion campaigns:

1. Weekly-newsletter
2. Retargetting-ad
3. Retargetting-campaign

What Is the User Journey?

CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?

Acquisition campaigns:

1. *Interview-with-cool-tshirts-founder:* Has the greatest amount of new customer acquisition (622, slide 8)

2. *Getting-to-know-cool-tshirts:* Second highest # of first touch (612, slide 8), and fourth highest # of last touch engagement, though the majority of its last touches send customers to the shopping page so it's primarily an acquisition campaign, not conversion (see slide 21)

Conversion campaigns:

3. *Weekly-newsletter:* Greatest number of last touches (447, slide 15), and sends the greatest number of last-touches straight to the purchase page (114, slide 16)

4. *Retargetting-ad:* A close second for highest number of last touches (443, slide 15), and sends the second highest number of customers to the purchase page (112, slide 16)

5. *Retargetting-campaign:* Third highest number of last-touch engagements (245, slide 15) with all last-touch engagements going to conversion pages (slide 16)

Optimize the Campaign Budget

Getting to Know CoolTShirts (NY Times article)

PAGE	CAMPAIGN	COUNT
2 - shopping_cart	getting-to-know-cool-tshirts	153
1 - landing_page	getting-to-know-cool-tshirts	38
3 - checkout	getting-to-know-cool-tshirts	32
4 - purchase	getting-to-know-cool-tshirts	9

```
WITH last_touch AS (
SELECT
        user_id,
        MAX(timestamp) as last_touch_at
FROM page_visits
GROUP BY 1
)
SELECT
        pv.page_name,
        pv.utm_campaign,
        COUNT(*)
FROM last_touch as lt
JOIN page_visits as pv
        ON lt.user_id = pv.user_id
        AND lt.last_touch_at = pv.timestamp
WHERE pv.utm_campaign =
'getting-to-know-cool-tshirts'
GROUP BY 1
ORDER BY 3 DESC;
```