**Intro / Prompt:**

WITH first\_touch AS (

SELECT user\_id,

MIN(timestamp) as first\_touch\_at

FROM page\_visits

GROUP BY user\_id)

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;

**Part 1:**

**Question 1\_1**

SELECT COUNT(DISTINCT utm\_campaign)

FROM page\_visits;

Result: 8

**Question 1\_2**

SELECT COUNT(DISTINCT utm\_source)

FROM page\_visits;

Result: 6

**Question 1\_3**

SELECT COUNT(DISTINCT utm\_campaign)

FROM page\_visits;

SELECT COUNT (DISTINCT utm\_source)

FROM page\_visits;

SELECT DISTINCT utm\_campaign, utm\_source

FROM page\_visits;

**Question 2:**

SELECT DISTINCT(page\_name)

FROM page\_visits;

**PART 2: What is the user journey**

**Question 3:**

**How many first touches is each campaign responsible for?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **user\_id** | **first\_touch\_at** | **utm\_source** | **utm\_campaign** | **COUNT (utm\_campaign)** |
| 99990 | 2018-01-13 23:30:09 | medium | interview-with-cool-tshirts-founder | 622 |
| 99933 | 2018-01-25 00:04:39 | nytimes | getting-to-know-cool-tshirts | 612 |
| 99765 | 2018-01-04 05:59:46 | buzzfeed | ten-crazy-cool-tshirts-facts | 576 |
| 99684 | 2018-01-13 13:20:49 | google | cool-tshirts-search | 169 |

WITH first\_touch AS (

SELECT user\_id,

MIN(timestamp) as first\_touch\_at

FROM page\_visits

GROUP BY user\_id)

SELECT ft.user\_id,

ft.first\_touch\_at,

pv.utm\_source,

pv.utm\_campaign,

COUNT (utm\_campaign)

FROM first\_touch ft

JOIN page\_visits pv

ON ft.user\_id = pv.user\_id

AND ft.first\_touch\_at = pv.timestamp

GROUP BY utm\_campaign

ORDER BY 5 DESC;

**Question 4:**

**How many last touches is each campaign responsible for?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **user\_id** | **last\_touch\_at** | **utm\_source** | **utm\_campaign** | **COUNT (utm\_campaign)** |
| 99933 | 2018-01-26 06:18:39 | email | weekly-newsletter | 447 |
| 99928 | 2018-01-24 05:26:09 | facebook | retargetting-ad | 443 |
| 99990 | 2018-01-16 11:35:09 | email | retargetting-campaign | 245 |
| 99589 | 2018-01-15 04:55:43 | nytimes | getting-to-know-cool-tshirts | 232 |
| 99765 | 2018-01-04 05:59:47 | buzzfeed | ten-crazy-cool-tshirts-facts | 190 |
| 99838 | 2018-01-02 07:40:34 | medium | interview-with-cool-tshirts-founder | 184 |
| 98840 | 2018-01-10 04:58:48 | google | paid-search | 178 |
| 99344 | 2018-01-18 21:36:32 | google | cool-tshirts-search | 60 |

WITH last\_touch AS (

SELECT user\_id,

MAX(timestamp) as last\_touch\_at

FROM page\_visits

GROUP BY user\_id)

SELECT lt.user\_id,

lt.last\_touch\_at,

pv.utm\_source,

pv.utm\_campaign,

COUNT (utm\_campaign)

FROM last\_touch lt

JOIN page\_visits pv

ON lt.user\_id = pv.user\_id

AND lt.last\_touch\_at = pv.timestamp

GROUP BY utm\_campaign

ORDER BY 5 DESC;

**Part 3: Optimize the campaign budget.**

**Question 5:**

**How many visitors make a purchase?**

SELECT COUNT(DISTINCT user\_id)

FROM page\_visits

WHERE page\_name = '4 - purchase';

**Question 6:**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **user\_id** | **last\_touch\_at** | **utm\_source** | **utm\_campaign** | **COUNT (utm\_campaign)** |
| 99933 | 2018-01-26 06:18:39 | email | weekly-newsletter | 115 |
| 99897 | 2018-01-06 09:41:19 | facebook | retargetting-ad | 113 |
| 99285 | 2018-01-24 09:00:58 | email | retargetting-campaign | 54 |
| 94567 | 2018-01-19 16:37:58 | google | paid-search | 52 |
| 92172 | 2018-01-16 15:15:29 | nytimes | getting-to-know-cool-tshirts | 9 |
| 98651 | 2018-01-15 04:17:36 | buzzfeed | ten-crazy-cool-tshirts-facts | 9 |
| 83547 | 2018-01-10 18:20:21 | medium | interview-with-cool-tshirts-founder | 7 |
| 95650 | 2018-01-18 00:25:00 | google | cool-tshirts-search | 2 |

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)

SELECT lt.user\_id,

lt.last\_touch\_at,

pv.utm\_source,

pv.utm\_campaign,

COUNT (utm\_campaign)

FROM last\_touch lt

JOIN page\_visits pv

ON lt.user\_id = pv.user\_id

AND lt.last\_touch\_at = pv.timestamp

GROUP BY utm\_campaign

ORDER BY 5 DESC;