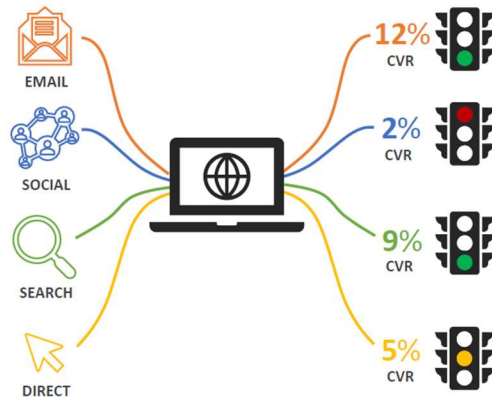# Traffic Source Analysis

Traffic source analysis is about understanding **where your customers are coming from** and **which channels are driving the highest quality traffic**

EMAIL   12% CVR

SOCIAL   2% CVR

SEARCH   9% CVR

DIRECT   5% CVR

COMMON USE CASES:

- Analyzing search data and shifting budget towards the engines, campaigns or keywords driving the strongest conversion rates

- Comparing user behavior patterns across traffic sources to inform creative and messaging strategy

- Identifying opportunities to eliminate wasted spend or scale high-converting traffic

WEBSITE_SESSIONS

SELECT * FROM website_sessions WHERE website_session_id = 1059

website_session_id	created_at	user_id	is_repeat_session	utm_source	utm_campaign	utm_content	device_type	http_referer
1059	2012-03-26 13:51:37	1055	0	gsearch	nonbrand	g_ad_1	desktop	https://www.gsearch.com

WEBSITE_PAGEVIEWS

SELECT * FROM website_pageviews WHERE website_session_id = 1059

website_pageview_id	created_at	website_session_id	pageview_url
2039	2012-03-26 13:51:37	1059	/home
2040	2012-03-26 13:54:27	1059	/products
2041	2012-03-26 13:56:48	1059	/the-original-mr-fuzzy
2042	2012-03-26 14:00:14	1059	/cart
2043	2012-03-26 14:04:06	1059	/shipping
2044	2012-03-26 14:05:47	1059	/billing
2045	2012-03-26 14:13:56	1059	/thank-you-for-your-order

ORDERS

SELECT * FROM orders WHERE website_session_id = 1059

order_id	created_at	website_session_id	user_id	primary_product_id	items_purchased	price_usd	cogs_usd
32	2012-03-26 14:13:56	1059	1055	1	1	49.99	19.49

When businesses run paid marketing campaigns, they often obsess over performance and measure *everything*; how much they spend, how well traffic converts to sales, etc.

Paid traffic is commonly tagged with tracking (UTM) parameters, which are appended to URLs and allow us to tie website activity back to specific traffic sources and campaigns

www.abcwebsite.com?utm_source=trafficSource&utm_campaign=campaignName

WEBSITE_SESSIONS

SELECT DISTINCT
    utm_source,
    utm_campaign
FROM website_sessions

utm_source	utm_campaign
NULL	NULL
bsearch	brand
bsearch	nonbrand
gsearch	brand
gsearch	nonbrand
socialbook	desktop_targeted
socialbook	pilot

Analysis Result

Which traffic source is the major traffic source based on number of sessions before April,12, 2012?

utm_source	utm_campaign	http_referer	total_sessions
gsearch	nonbrand	https://www.gsearch.com	3613
NULL	NULL	NULL	28
NULL	NULL	https://www.gsearch.com	27
gsearch	brand	https://www.gsearch.com	26
bsearch	brand	https://www.bsearch.com	7
NULL	NULL	https://www.bsearch.com	7

- Major Source of Traffic is = **gsearch-nonbrand** with total **3613 sessions** before April 12, 2012.

Will gsearch-nonbrand session are driving sales or not? The Expected CVR = 4% to make the numbers work.

sessions	orders	session_to_order_conv_rate
9843	279	0.0283

- As the **CVR is 2.83% < expected 4%** need to **reduce the bid on gsearch-nonbrand** as we are over spending on this paid campaign has to save some money know

Bid Optimization Analysis

Analyzing for bid optimization is about **understanding the value of various segments of paid traffic, so that you can optimize your marketing budget**
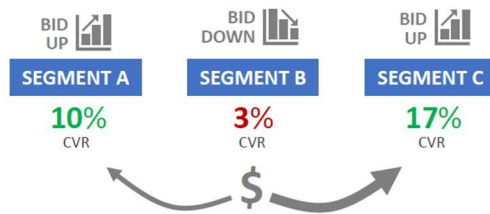
COMMON USE CASES:

- Using conversion rate and revenue per click analyses to figure out how much you should spend per click to acquire customers

- Understanding how your website and products perform for various subsegments of traffic (i.e. mobile vs desktop) to optimize within channels

- Analyzing the impact that bid changes have on your ranking in the auctions, and the volume of customers driven to your site

Analysis Result

As the gsource-nonbrand was giving less CVR the company made its bid down at April 15, 2012. Therefore, need to get the session volume by weekly for gsource-nonbrand, to see if the bid changes from up to down has an impact on the session volume to drop

week_start_date	sessions
2012-03-19	896
2012-03-25	956
2012-04-01	1152
2012-04-08	983
2012-04-15	621
2012-04-22	594
2012-04-29	681
2012-05-06	399

- This shows that gsearch-nonbrand is fairly sensitive to bid changes.

Pull conversion rate (CVR) by device type?

device_type	sessions	orders	conv_rt
desktop	3911	146	0.0373
mobile	2492	24	0.0096

- This shows that we have to rise our bid on desktop and rank higher in auctions

Now the company has increased its bid for gsearch-nonbrand for device type desktop on May 19,2012 and we received mail on June,9,2012 that need weekly analysis of device type session volume

week_start_date	dtop_sessions	mob_sessions
2012-04-15	383	238
2012-04-22	360	234
2012-04-29	425	256
2012-05-06	430	282
2012-05-13	403	214
2012-05-20	661	190
2012-05-27	585	183
2012-06-03	582	157

- Desktop session volumes looking great whereas the mobile session volumes are flat

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