

# Traffic Source Analysis

Traffic Source Analysis is all about understanding where our customers come from and which of particular channels are driving the highest quality traffic.

In real word, our customers are coming from e-mails, social media, search, and direct traffic.

Then we're going to be looking at conversion rates which is the percentage of those sessions which convert to our sales or revenue activity we do the conversion rate analysis so that we can understand how highly qualified that traffic is and how valuable each of those traffic sources is to us.

## Some of our common use cases

- Are analyzing search data and shifting budgets towards one engine or another looking at different campaigns or keywords to see which have the best conversion rates.
- We could compare user behavior patterns across different traffic sources and we can look for opportunities to eliminate wasted spend within our paid marketing channels.
- We can also look at channels which are performing very well so that we can try to scale those up so before we get into

# Traffic Source Analysis | SQL

```
36 SELECT
37     utm_source,
38     utm_campaign,
39     http_referer,
40     COUNT(website_session_id) AS sessions
41 FROM website_sessions
42 WHERE created_at < '2012-04-12'
43 GROUP BY 1, 2, 3
44 ORDER BY 4 DESC;
```

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Result Grid Filter Rows: Search Export:

	utm_source	utm_campaign	http_referer	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

UTM: [Urchin Tracking Metrics](#).

website\_sessions: [Table containing all the website sessions](#).

website\_session\_id: [Primary Key in website\\_sessions](#)

## Findings:

- This is a pretty obvious story we can say that G search non brand is the most important marketing channel brining in the traffic.

# Traffic Conversion Rate Analysis | SQL

```
17
18 • SELECT
19     W.utm_source,
20     W.utm_campaign,
21     W.http_referer,
22     COUNT(W.website_session_id) AS sessions,
23     COUNT(O.order_id) AS orders,
24     (COUNT(O.order_id)/COUNT(W.website_session_id))*100 AS conversion_rate -- gives what percentage of sessions result in orders
25 FROM website_sessions as W LEFT JOIN
26     orders AS O ON W.website_session_id = O.website_session_id
27 WHERE W.created_at < '2012-04-14'
28 GROUP BY 1, 2, 3
29 ORDER BY 4 DESC;
```

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Result Grid Filter Rows: Search Export:

	utm_source	utm_campaign	http_referer	sessions	orders	conversion_rate	
▶	gsearch	nonbrand	https://www.gsearch.com	3895	112	2.8755	
■	NULL	NULL	NULL	34	1	2.9412	
■	NULL	NULL	https://www.gsearch.com	34	0	0.0000	
■	gsearch	brand	https://www.gsearch.com	31	3	9.6774	
■	bsearch	brand	https://www.bsearch.com	7	0	0.0000	
■	NULL	NULL	https://www.bsearch.com	7	0	0.0000	

orders: Table containing all the orders.

order\_id: Primary Key in orders

Why Left Join? : Left Join will result in all the data from website\_sessions and the matching data from orders, which helps with conversion rate analysis.

Findings:

- Except the gsearch brand, the conversion rate is way below. Company needs to optimize marketing bids.

# Bid Optimization and Trend Analysis

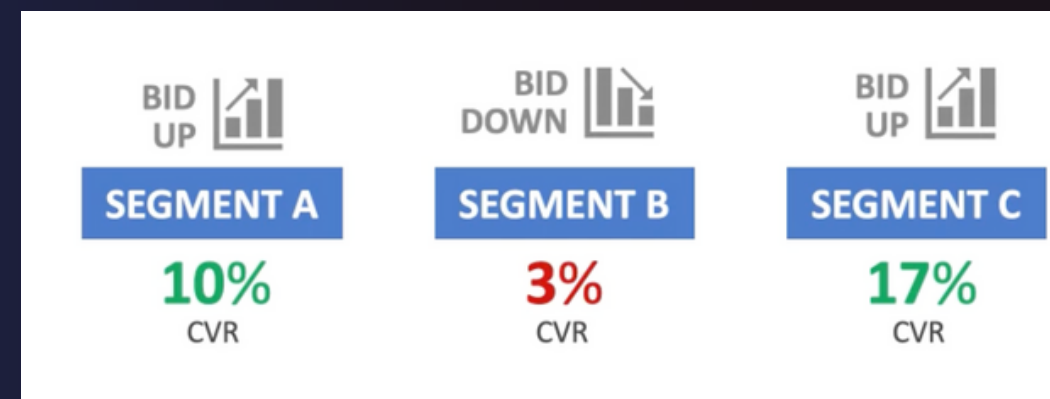
Bid Optimization is all about understanding the value of various segments of your paid traffic so that you can optimize your marketing budget you're going to be trying to help your marketers figure out what is the right amount to bid for various segments of that traffic based on how much revenue it makes you.

Some of our common use cases

- Understanding conversion rates and revenue per Click to figure out how much you could spend.
- Also look at various sub segments of your traffic
- Impact that bid changes have on how you're ranking in these paid auctions and how much volume of customers you're getting from those paid marketing channels when you dial up or dial down bids

Trend Analysis

MySQL date functions these are really powerful when you wanna do trending analysis.

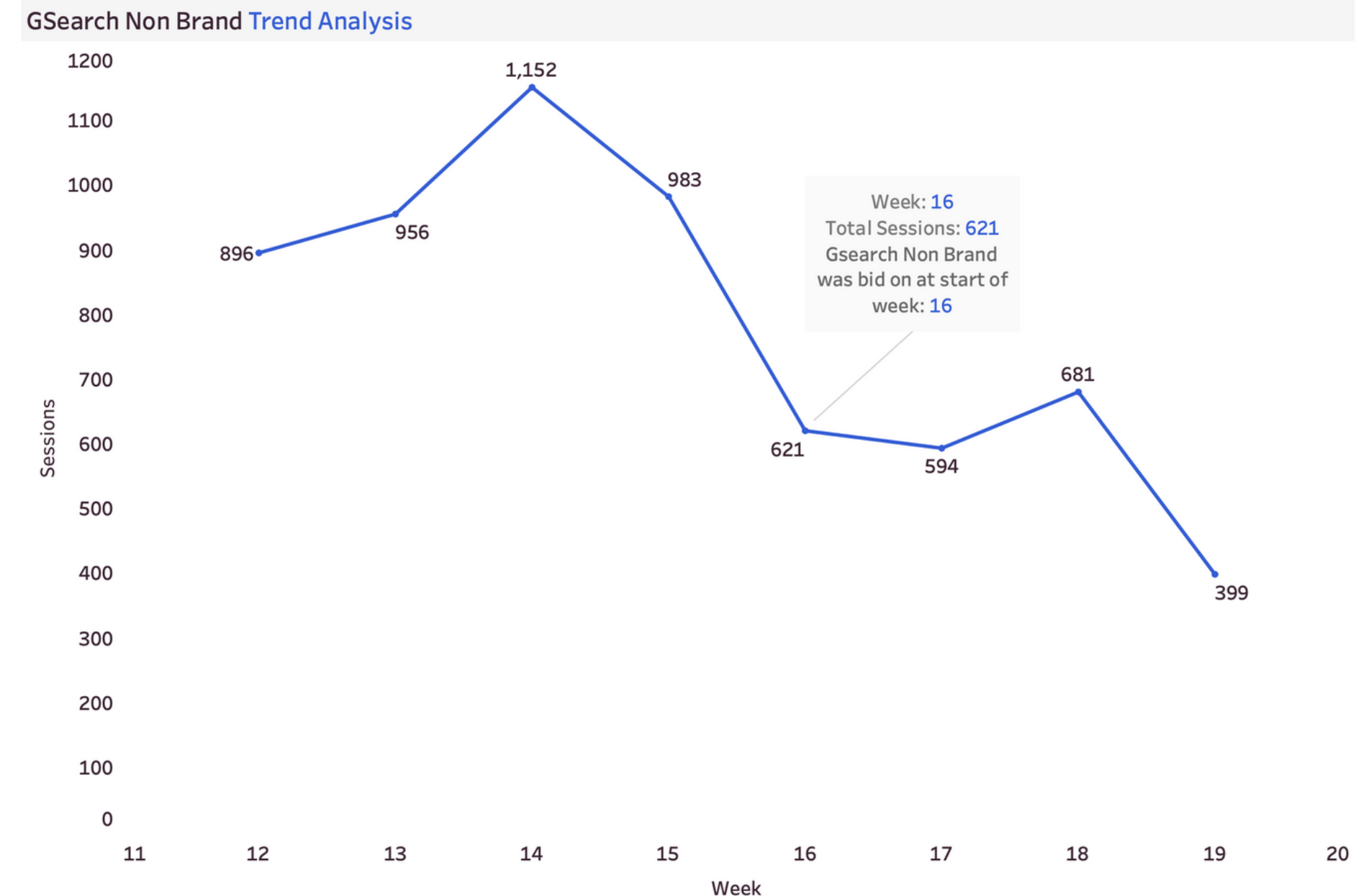




# GSearch Non Brand Trend Analysis | SQL

```
35  -- Gsearch non brand trend analysis [WEEK]
36  -- Bid down on 2012-04-15 because of the low conversion rate
37
38  SELECT
39      YEAR(created_at) AS year,
40      WEEK(created_at) AS week,
41      MIN DATE(created_at) AS start_of_week,
42      COUNT(website_session_id) AS sessions
43  FROM website_sessions
44  WHERE utm_source = 'gsearch' AND
45         utm_campaign = 'nonbrand' AND
46         created_at < '2012-05-10'
47  GROUP BY 1,2;
48
49  -- Traffic decreased from a high of 1152 sessions to 621 on 2012-04-15 [Week 16]
50  -- Traffic remained stabled for 2 weeks since bid down, went to all time low by week 17
```

	year	week	start_of_week	sessions	
▶	2012	12	2012-03-19	896	
■	2012	13	2012-03-25	956	
■	2012	14	2012-04-01	1152	
■	2012	15	2012-04-08	983	
■	2012	16	2012-04-15	621	
■	2012	17	2012-04-22	594	
■	2012	18	2012-04-29	681	
■	2012	19	2012-05-06	399	



## Findings:

- Traffic decreased from a high of 1152 sessions to 621 by end of Week 16.
- Traffic remained stabled for 2 weeks since bid down, went to all time low by week 17.
- Need to find the ways to improve the efficiency of the marketing channel.

# GSearch Non Brand Device Level Analysis | SQL

```
-- conversion rates across device types

SELECT
  W.device_type,
  COUNT(W.website_session_id) AS website_sessions,
  COUNT(O.order_id) AS orders,
  COUNT(O.order_id)/COUNT(W.website_session_id) AS conversion_rate
FROM website_sessions AS W LEFT JOIN
  ORDERS AS O ON w.website_session_id = O.website_session_id
WHERE W.created_at < '2012-05-11'
AND W.utm_source = 'gsearch' AND
W.utm_campaign = 'nonbrand'
GROUP BY 1
ORDER BY 4 DESC;
```

17:66

Result Grid

Filter Rows: Search Export:

devic...	website_sessions	orders	conversion_rate
desktop	3911	146	0.0373
mobile	2492	24	0.0096

UTM: Urchin Tracking Metrics.

website\_sessions: Table containing all the website sessions.

website\_session\_id: Primary Key in website\_sessions

Findings:

- We've got device type sessions orders and we have conversion rate and so what's interesting here is the conversion rate for your desktop traffic is about 3.7 %.
- 3.7% of sessions matriculate to a revenue generating order for the business for mobile traffic it's less than 1%.

# GSearch Non Brand Device Level Trend | SQL

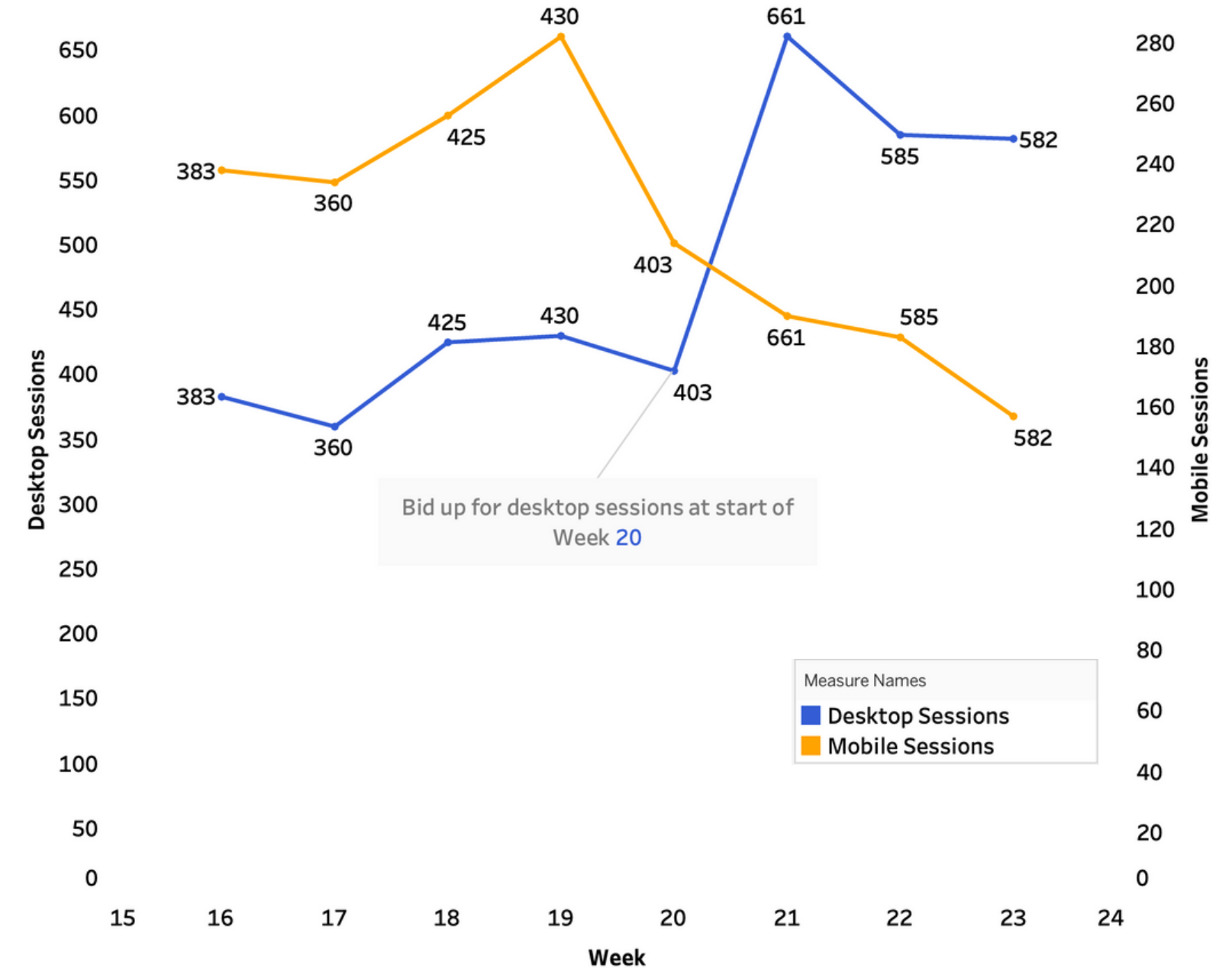
```
71
72 -- Bid up Gseach Non Brand computer marketing campaign
73 -- Lets look at weekly trends of traffic at with device type
74
75 • SELECT
76     YEAR(created_at) AS year,
77     MONTH(created_at) AS month,
78     WEEK(created_at) AS week,
79     MIN DATE(created_at) AS week_start_date,
80     COUNT(CASE WHEN device_type = 'desktop' THEN website_session_id ELSE NULL END) AS desktop_sessions,
81     COUNT(CASE WHEN device_type = 'mobile' THEN website_session_id ELSE NULL END) AS mobile_sessions
82 FROM website_sessions
83 WHERE created_at BETWEEN '2012-04-15' AND '2012-06-09'
84 AND utm_source = 'gsearch'
85 AND utm_campaign = 'nonbrand'
86 GROUP BY 1,2,3;
87
```

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Result Grid Filter Rows: Search Export:

	year	month	week	week_start_date	desktop_sessions	mobile_sessions	
▶	2012	4	16	2012-04-15	383	238	
	2012	4	17	2012-04-22	360	234	
	2012	4	18	2012-04-29	98	61	
	2012	5	18	2012-05-01	327	195	
	2012	5	19	2012-05-06	430	282	
	2012	5	20	2012-05-13	403	214	
	2012	5	21	2012-05-20	661	190	
	2012	5	22	2012-05-27	455	138	
	2012	6	22	2012-06-01	130	45	
	2012	6	23	2012-06-03	582	157	

GSearch Non Brand Device Level Trend



## Findings:

- Bid changes that were made for desktop, resulted a pop in desktop traffic after the bid up and we didn't see any kind of a pop for mobile. We can pretty confidently say that those bid changes did help us create this additional surge in desktop volume.