ABSTRACT

Website traffic analysis is the process of collecting information about every web user who visits E-commerce sites and interpreting key data metrics that describe the web traffic in terms of how long they stay what they do, and reasons to leave the websites. It determines a website's popularity and visibility.

GOAL OF TRAFFIC ANALYSIS

Traffic analysis is the process of intercepting and examining messages in order to deduce information from patterns in communication. It can be performed even when the messages are encrypted.

PURPOSE OF WEBSITE TRAFFIC ANALYSIS

Website traffic analysis tools help you identify the types of users that visit your website, their interests, and every action they on your web pages. As a result, you'll discover how to improve user experience (UX) and get a clearer picture of how well your website is performing

Key entities involved in reporting web traffic analytics

Source

The ***source*** defines the site or the platform from which a user clicks a link to enter your website (in JavaScript, this is the

«document.referrer» string). If the source page is another page on your own site, it’s just called the previous page.

The source of your traffic may be presented as a link to a web address from which each particular visitor came from.

Your sources might be:

- www.yourbestfriendwebsite.com
- youtube.com
- thebestbusinessesreview.us
- google.com
- facebook.com,
- www.owox.com, etc.

The point is that people can visit your website from different types of links and through different **channels**.

When the source is undefined, typically the traffic is marked as ***Direct***.

This happens for one of 2 main reasons:

- The ***User*** types the URL in the browser (or uses a bookmarked tab);
- The *source* is not specified due to privacy regulations and cookie restrictions.

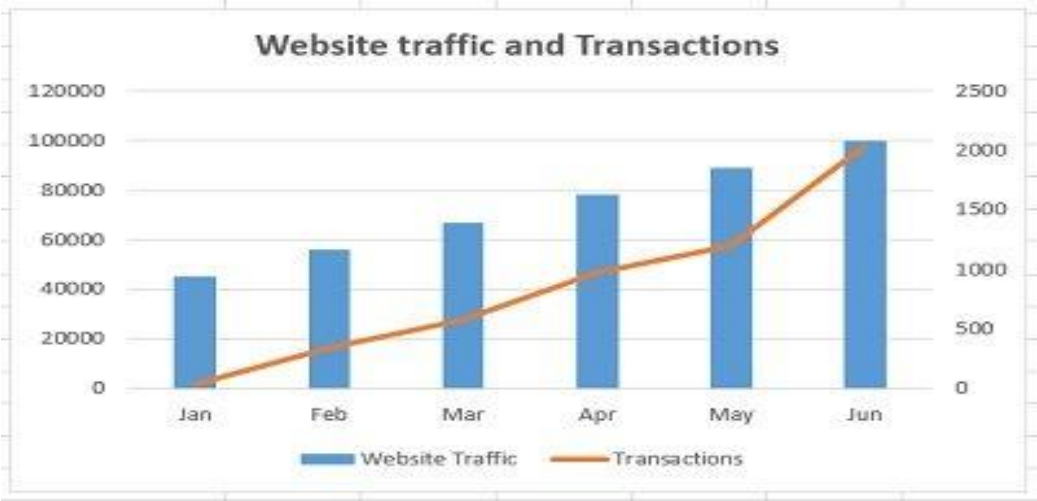
Channels (presented as a medium in UTM)

The *channel* refers to the way in which a visitor navigates to your site. For example, these are some of the channels in Google Analytics 4:

- organic (free search traffic: eg. Google or Bing search)
- paid search (paid search: eg. Google ads)

- referral (your partners, affiliates)
- display (banner ads)
- social (social media posts: eg. Instagram stories)
- email (email marketing)
- none (undefined or unset medium)
- other (you can pre-configure custom UTM tags based on your mediums)
- You can read more about UTM tagging and use it in your own web traffic analysis. It’s handy to create custom segments on the basis of channels and analyze targeted traffic apart from all other traffic.

Website traffic and transaction




```
with
plt.style.context('dark_background'):
    fig =
plt.figure(figsize=(20,10))
    #creating a subplot
    ax1 =
fig.add_subplot(1,1,1)


#creating the animation
function.
    def animate(i):

        lines =
df3.iloc[0:int(i+500)] #   set
the variable data to contain
```

```
0 to the (i+1)th row. I
wanted only the last data
and the predictions to be
animated, so put i+500.

        xs = []
        ys = []
        zs = []
        for line in lines:
            if len(line)>1:
                xs = lines['ds']
                ys = lines['yhat']
 #the predictions
                zs = lines['y']
    #the normal data point

# Creating the ax labels,
title, legend and plotting
value
        ax1.clear()

ax1.set(title='Predicting the
future traffic of my
website',xlabel= "Time",
ylabel='Traffic')
        ax1.axis(xmin=
(df3['ds'].min()),
xmax=(df3['ds'].max()))
        ax1.axis(ymin=
(df3['y'].min()-1),
ymax=(df3['y'].max()+5))
```

```
#adding a bit of margin with -1 and +5

        ax1.plot(xs, ys, label='prediction', color='#0693e3')
        ax1.plot(xs, zs, marker = '.' ,linewidth = 0.0, label='data', color='#afdedc')
#linewidth is not visible at 0.1, I change to 0.3
        ax1.legend(loc='upper left', frameon=True, framealpha = 0.5 )
```