WEBSITE TRAFFIC ANALYSIS

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.

Introduction

Traffic analysis is the method of intercepting and analyzing communications in order to deduce information from streams of traffic.

Website traffic analysis

Web traffic analytics refers to collecting data about who comes to your website and what they do when they get there. That data is crucial to building effective sales and marketing strategies.

Types of traffic analysis

- Direct Traffic. As we mentioned, direct traffic is categorized as traffic that does not come from a referring website. ...
- Organic Traffic. ...
- Paid Search Traffic. ...
- Social Traffic. ...
- Email Traffic. ...
- Referral Traffic. ...
- Other.

Methods of website traffic analysis

There are two methods of traffic-analysis attack, passive and active. In passive traffic-analysis method, the attacker extracts features from the traffic of a specific flow on one side of the network and looks for those features on the other side of the network.

Used for traffic analysis

One of the most widely used and essential traffic analysis tools is Google Search Console. It is a free service provided by Google that allows website owners to monitor and optimize their sites' visibility in search engine results.

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.

Proposal

- Overview. Think of this section as your first impression.
- Goals. A project goal is what the client hopes the project will accomplish.
- Solution. The solution describes how you'll reach the project's goals and/or solve the problem.

- Schedule.
- Quote.
- Terms.
- Call-to-Action.
- Coverage.

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.

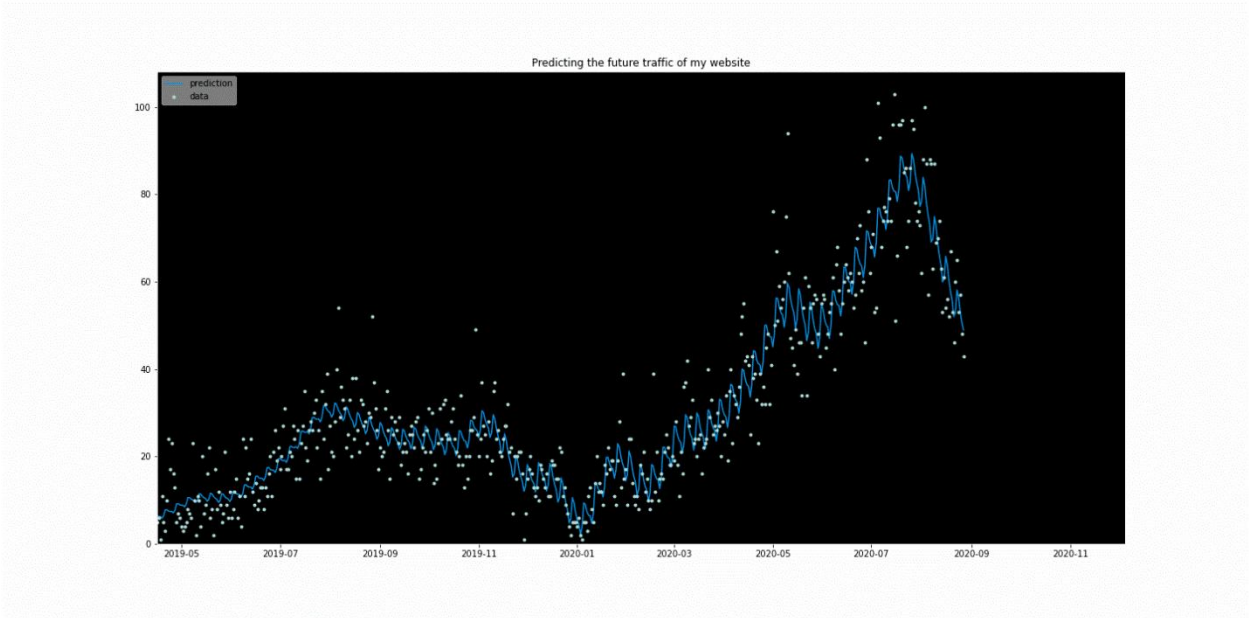
Website traffic and transaction

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='upperleft', frameon=True,framealpha = 0.5)
```

Output



Conclusion

Finally, analyzing website traffic is important for improving your website's performance. By understanding how users interact with your website, you can identify areas for improvement and make changes to optimize the user experience and increase conversions.