Web Traffic Perspective of State Universities of Haryana

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Abstract: The performance of a website is indicated directly by the web traffic it engages. Web traffic is basically the amount of data sent and received by visitors of a website and is often measured in terms of several metrics. These can be number of visitors, unique or repeated; pages per visit, duration of the visit and bounce rate etc. Visualization of this data helps in anticipating the facts like presentation of the website from end users' perspective, where the significant amount of traffic is coming from, what areas the website needs to draw users' attention from; and hence, steps for the improvement can be thought of. A range of web analytic tools are present globally to facilitate the collection and evaluation of website visitor data. In this paper, a comparative study of the web traffic of seven state universities of Haryana has been presented in analytical form using an online web analytic tool.

1. Introduction:

The foundation of running a successful website is to have end users' satisfied with their browsing experience. This can be evaluated by gaining an insight into the visitor metrics to ascertain website's traffic levels and visitor distribution [[9]]. These metrics help to establish a baseline from which the performance of website can be examined and further improvements can be planned if needed. Focusing on website users, the main questions are how many daily/monthly visitors it receives, the referral source or channel that is driving the most traffic; is the site sticky or it bounces off the visitors etc. All such questions have direct impact on the user satisfaction and can be answered with the help of a web analytic tool.

Site usage and referrers directly influence the performance of the website [[10]]. Site Usage can be measured in terms of number of visitors which can be evaluated on daily, monthly or annual basis as per the need. Keeping track of the referrers (which websites are sending visitors to site under consideration) gives a vision about facts like how visitors are arriving at our site, what are the basic keywords used for landing on our site etc. Basically, three heuristics are described for using web analytics based on improving site content and structure: firstly, evaluating 'branding' by ensuring an "engaging or memorable experience"; secondly, examining the 'usability' by ensuring that visitors can accomplish their tasks, and finally, making sure that content is 'appropriate' and the navigation is optimized [[12]].

2. Methodology and Tools Used:

For performance analysis and qualitative approach many unbiased efforts have been made. After lots of work, it has been decided to take similar pattern universities and for this purpose, seven of the government universities of Haryana belonging to Science and Technology domain have been taken into consideration for a comparative analysis of their online traffic. The tool used for this analysis is a free online web analytic tool [15], similarweb.com[[8]]. All the data is recorded on January, 2017 which is *averaged over last 28 days* as notified by the tool. Several audience-related metrics are recorded for each of the official university website for having an insight into their performance from web traffic view. The results are presented in the form of suitable charts generated using Microsoft Excel, for a convenient comparative view.

The data has been taken from following universities:

- 1. www.kuk.ac.in
- 2. www.mdurohtak.ac.in
- 3. www.cdlu.ac.in
- 4. www.gjust.ac.in
- 5. www.dcrustm.ac.in
- 6. www.crsu.ac.in
- 7. www.cblu.ac.in

3. Facts and Findings:

3.1. Average Daily Visits:

This is the measure for keeping track of daily visitors of the website on average. Figure 1, shows the average daily visits of the website over a period of 28 days. As per the graph analysis, it is clear that Kurukshetra University is having the highest average daily visits during this period of session.





3.2. Monthly Visits:

Under this metric, the monthly traffic of the website is recorded. The results have been plotted as Figure 2, showing that the website of KUK attracted most audience while CBLU, the lowest.



Figure 2 Monthly Visits

3.3. Bounce Rate:

Bounce Rate is the percentage of the visitors who come to visit the website and leave without viewing any other pages. Hence, an average bounce rate of 65% means, 65% of the visitors left after viewing only the page they entered on, regardless of whether it was the home page or any internal webpage. Clearly, higher bounce rate indicates inability of the website in retaining its visitors.



Figure 3 Bounce Rate

The key to having a moderate bounce rate is to make user visit even more pages throughout the site, once it lands on a page. The main question is whether having higher bounce rate is good or not. It depends on the goal of the website. Not every site's goal is to have visitors browse eternally through the site content but instead it could be to take a call to action for some. If the goal only requires people to visit one page on the website then bounce rates are not worth bothering. Figure 3, shows the bounce rates for university websites. The higher bounce rates in this case are not alarming since a notable fraction of users on these websites might only be interested in knowing the details which, they are more likely to find on a single page, for instance, date sheet, syllabi, prospectus, merit lists, announcements, annual reports, seminars/workshops, and vacancies etc., hence, contributing directly to the higher bounce rate.

3.4. Traffic Referrers

The traffic migrating to the website is coming from several sources. Keeping track of these sources is useful for targeting the audience in a better way. It gives insight into the areas from where the traffic is coming in plenty as well as the ones which lack in directing the users to the website and thus, need more attention. Proper actions like social media campaigns, advertisements etc, can be taken to make such sources more productive. Generally, the users may come to the site directly, or through mails, referrals, ads, from social media, organic search or through paid search.

Figure 4, presents the traffic migrating to the websites from several sources. Most of the traffic is coming from the searches made through search engines, very little fraction of visitors is coming from mails and social media, while almost no traffic is coming from referrers like displayed ads and paid searches.



Figure 4 Traffic Overview

3.5. Traffic through Desktop Vs Mobile:

In this busy world, the websites are not only browsed through desktop systems but equally, through mobile devices like mobile phones, tablets etc. The percentage of the audience visiting the website through desktop and mobile can also be measured through these analytical tools. Figure 5, shows that most of these websites are being used more through mobile devices as compared to the desktop systems. Hence, there is a need for websites to be upgraded for being more mobile friendly.





4. Conclusion:

Many metrics have been taken into account in this analysis of the state universities data. As per the analysis, the Average Daily Visits as well as Monthly Visits are found to be more for the KUK website than others. The Bounce Rate for the websites of MDU is highest while that of CBLU is lowest. The analysis of referrers suggests that most of the visitors are directed from non-paid searches while paid searches, mails, social media and displayed ads have little or almost no contribution in directing audiences to these websites. Further, it shows that almost equal ratio of audience are using mobile devices as that of the desktop systems to browse the websites, giving a clear indication of the fact that websites need to be mobile friendly so as to facilitate mobile users. More aspects are still required as other metrics involving pageviews, clickstream data, identification of unique users, load time, page size, user sessions and other things. Efforts are on to carry out this analysis and compare them for concrete results.

References:

- [1] Available at <u>www.kuk.ac.in</u>, accessed on Jan, 2017
- [2] Available at <u>www.mdurohtak.ac.in</u>, accessed on Jan, 2017.
- [3] Available at www.cdlu.ac.in, accessed on Jan, 2017
- [4] Available at www.gjust.ac.in, accessed on Jan, 2017
- [5] Available at <u>www.dcrustm.ac.in</u>, accessed on Jan, 2017

- [6] Available at <u>www.crsu.ac.in</u>, accessed on Jan, 2017
- [7] Available at www.cblu.ac.in, accessed on Jan, 2017
- [8] SimilarWeb Tool available at http://www.similarweb.com/
- [9] Clifton, Brian. Advanced web metrics with Google Analytics. John Wiley & Sons, 2012.
- [10] Booth, Danielle, and Bernard J. Jansen. "A review of methodologies for analyzing websites." IGI Global (2009): 141-62.
- [11] Waisberg, Daniel, and Avinash Kaushik. "Web Analytics 2.0: empowering customer centricity." The original Search Engine Marketing Journal 2, no. 1 (2009): 5-11.
- [12] Wiggins, Andrea. "Information architecture: Data-driven design: Using web analytics to validate heuristics system." Bulletin of the Association for Information Science and Technology 33, no. 5 (2007): 20-24.