

Learning Analytics Tools
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Descriptive Analytics – Example 1

In this week, we saw about descriptive analytics, I started about what is a data and how to describe the data in plots or graphs, we discussed very basics plots and which plot to choose. Let us look at few examples about descriptive analytics i.e. let us start with Google analytics.

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If you have a website then you can add Google analytics code on it and you can see how many users are using this website, what are their behaviour or everything. Let us check Google analytics and understand what this analytics means here. So this is a sample Google Analytics page of one of our website, here I am showing the data of last 28 days from the Google analytics.

So, it uses a simple line plot. It tells you how the number of users is changing over time. So, the number of users is really low except the one particular day.

So, last 28 days this shows the simple line chart, why line chart? Because we want to show the progress over time, that is from the last 28 days. So, it is a simple chart to show how many users visiting a website.

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Or if you look at the user traffic, Google analytics gives me the bar chart a stacked bar chart, so here the bar chart is showing last ninety days, not 28 days. And you the number of direct users is more. The direct users do not search on Google to find it instead we might have shared the link to them they would have clicked the link directly in their mobile phone or in WhatsApp or somewhere Facebook page or from the website of our web page. So, around 90 per cent or more than 90 per cent of users click on direct links.

There are few users are from the social link and few from organic search, organic search is of one who came to this website by searching in Google, so it is not happening much. If your website owner if you want to know why the people are not coming to your site from a Google search it might be because you might be lagging that tag words or keywords or you have not done the SEO(Search engine optimization).

SEO will help you to get more kind of customers from Google search to your webpage page. But this webpage is not doing good in term of pulling the users from Google search, so most of the users are from a direct link.

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Heat map and Space plot



So, let us look at this plot we have not talked about this plot in our basic plots, this one is called heat map this is called “space plot”. So, space plot is very easy to understand and show which particular place is more concentrated, it is also a kind of heat map on the space.

So, here the darker indicates a lot of users from this, so maybe around 95 per cent of users are from India very few are from Ethiopia or Mauritius or Tanzania or the United States, few users from Japan as well. So, there are very few users from other continent or other countries but most of the users from India that is indicated in the space chart. This is a heat map we are looking at the heat map for the last 30 days.

So, if you look at the heat map it is distributed for 7 days all the time like 24 hours and seven days. So, this darker colour indicates the more number of users are using that particular time, the light colour indicates the less number of users are using this particular or checking this site. You can understand that from morning 2 am to 4 am very fewer users have used. Grey colour indicates there is no user i.e. no user viewing this page at that time.

It is obvious that if most of these users are from India and so obviously, they are be sleeping at 2 to 4 pm they are not checking any websites or they are not looking at the websites for our websites. So, that is obvious and if you look at it, for Thursday on an average around 10 am to 2 pm as a more number of users seeing it. We do not know what happened if you remember the first chart I showed on a particular day there are more number of users that particular day might be Thursday that is why this number is increasing.

So, you have to compare not just one chart will tell you all the detail you have to combine these charts.

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And this is a behaviour flow this is a bit advanced to know that which particular webpage which particular page a student moves from the landing page to another page. Almost all the user landed on this page that is the homepage which means they directly came here they did not come

via some other page. So, they directly come to our page that is why the direct search is more 95 per cent. After they land on the home page some of them dropped most of them went to the technology (online technology) page or second page, few of them into some teaching links or something like that.

So, you can know where the user wants to go from one page to another page. So, if you have Google analytics code embedded with your website then you can check your analytics.

Like it is good that all the people who landed 24% are going to this particular page, 14% are going here and say around 50 per cent are going to the next page. Almost 50 per cent might be dropping out. Or people might be landing from different pages directly instead of the landing page. So, you can save this as first interaction second interaction and you can go further but if the drop is increasing there is no need to go further.

This kind of behaviour flow chart actually tells you within the web page where the user is going from one page to another page, so this is useful for viewing that page. Consider you are creating a learning environment which has 10 pages of reading and they have to create something they have to answer something. You expect the students to read 10 pages of a document or some content and ask them to answer some questions for simple learning and environment your creating.

In that, if you have the analytics like this then you will know that when the student transfer from one particular page to another page, what happened, where they are dropping out? All this information can be captured by using this kind of behaviour flow.

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Summary

- Google Analytics Dashboard



So, we saw one example that is Google analytics dashboard, we will see a couple of more examples in descriptive analytics like a dashboard from YouTube analytics or dashboard from some other MOOC or something like that. Thank you.