HR Analytics

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Week: 2

Lecture 09: Data Visualization Power BI – 2

Dear participants, in the first session we learn the Power BI, we had learned how to visualize the data, right. So, the interest variable was count, like based on numbers we were visualizing the data. In this session, we have some other variables also like age, like work experience, like expected salary, right? So, these variables that we have, so if we want to know what is the average salary that people are expecting who have applied for our job. If we want to know what is the average age of the people, if we want to know what is the number of male and female and what is their average age because it will help us to understand the diversity. If we are planning for the diversity in our organization then it may help us. So, we will understand.

Next excel sheet we have already explained, so, in that these variables were there. So, in this session we will take the variables like age, like age, work experience, and expected salary and then we will visualize the data and we will try to make some of the interpretation based on that data. Or we will be able to narrate a story about the work experience of the applicants or average age of the applicants, right? or expected salary, right. So if we want to tell a story, so based on this numbers and data and visualization, you can tell a story or you can make a presentation, you can make a report for your organization.

So let us start the hands-on exercise on Power BI. So in last session, we had visualized the data based on the numbers. So you can see this is a Power BI So, here page number 1 if you want to give a title to it just what you can do right click and you can see duplicate, rename, delete and hide. So, just you can give a I have clicked on rename. So, I have given a count or I can say data analysis by count.

So, simple I have given a based on count. So, next sheet that I have select I am going to select and I said, we will work on age, right. So age, so I have given a age title. So age related data that is what we will discuss, we will analyze and in this session. So let us assume we are analyzing the data that is who have applied and what is their age.

So if we want to understand the age combination of these various applicants, so that is

what we will understand. So we will, first thing that we will do, we will go to the new major, write new major that we will click on. So, you can see this kind of dialog box will be open. So, major is there. So, first we will remove and we will write average age, average age equal to calculate that you can see calculate and then average So, now you after average you can see all variables are coming.

So, if we want to do the analysis on age, averages will come. If I want to do a salary then on salary it will come or third that number variable that you can see salary, age and work experience. So, work experience also you can see somewhere. So, last one is the work experience is there. So, work experience that you can click.

So, this is the work experience. So, but for this case I am going to take the age, seed 1 age. So, just I have clicked on age, close the bracket, press the enter. The moment you will press the enter, so right hand side data is there, now you can see the average age is there. So that new variable that has come that is the average age.

So if I want to know what is the average age of all applicants. So what I will take, simply I will take this card and I will put this average age on this. So, average age for all participants who have applied to this organization is 45.99, right? This is the, if I want to know what is the average age for male and female, right? So, let me take this bar graph, okay? One second, just let me do this. And I have to click here and now I can take this bar graph.

So, average age for male and female. So, I have put this average age into the y and gender into the x axis. So, now you can see this average age by gender. And that I already said to you how to put the number go to the below the visualization you will see format your visuals. Click on this right go to down data levels is off just you need to click on this on.

So, now you can see it is showing. So, 48 is the average age for 47.22 is the average age for the male and 44.08 is the average age for the female. So, this is the A average age by male or female.

Next if I want to know this average age by city wise. So, what I can do? First I will select a graph. So that bar graph that I have selected city wise so again you can see average age that I am going to put into the y axis, city that I am going to put into the x axis. So this is the average age by city. So now by city that you can see if again you have to just put a number on the top, click on this, format your visuals, data levels, click on this, so data off is there, just say on it and now you will get the average age by city wise.

Next if I want to know this average age by this education level, so again I need to select a new graph, so again I have selected this bar graph, so bar graph that I have selected So, you can see x and y axis are coming. So, on y axis that I am going to put the average age right and now I want to know education wise let us put under x axis education. So, now you can see education wise also this average as has come and the same way you can beautify it. Same thing if I want to do for this department wise, that city wise that I have already done, department wise, gender wise, right. So department wise if I want to do, so I have selected again that new graph has come.

So averages I will put into the Y and department I will put into the X. So now you will get the averages for the each department here. Right for each department that you are getting the averages. So gender that we have convert and next thing if we want to know people who are coming for the interview right what is their averages and people who are not coming for the interview what is their age right. So next one that I want to know so then again I have selected this.

So averages that I will put into the y axis and that I next variable that I was talking about status of interview whether they are coming or not. So, status of interview that is what you can see. So, that average is that you can see for 46 who are not coming and who are coming that you can see is the 44. So, here you can see the variable and ask the question what your manager wants to know related to the age. If your manager wants to know related to your source of application through the various types of the application, what is the average age? So, average is, so first I have selected the graph.

Right then averages that I will put into the Y and source of application that I have put into the X. So now you can see the source averages by the source of application from which source right and this is interactive in nature that I had said in the last session also. So if you will click on this mail then entire data that you will get related to the mail If you will, I will click on female then you can see all graphs has changed with respect to the female. So this is the beauty of this. So just what you need to do once you have created these all graphs, now you ask questions to these graphs and see whether these graphs are giving the answers to your questions or not.

So in coming sessions that you will see as a manager every day some questions that you need to answer. Write to your manager. So make a list of all those questions, write make list of those variables, collect the data in that format and make the graphs in that format so that your graphs are giving the answers, right. So one variable that we have taken the age. Similarly, we can take a variable.

So I am going to give the name this to age 2 because two sheets that we have used for

the age. So, count, age, age 2. Next sheet that we are going to take, in this we will discuss about the work experience, right? So, work experience, So, I have given the title work experience. So, again what I will do? I will create a new measure, right? So, average work experience, average work experience right the title that I have given right. So, if you remember how we calculated.

So, first equal to then calculate. So, function is coming calculate. So, what I need to calculate? I need to calculate the work, I need to calculate the average right. So I have clicked on this average. Now you will see the all list of variables is coming.

So I need to calculate the work experience, close the bracket and just click on this, right. So new variables has come that is the work experience. Now I want to know what is the work experience, average work experience of my applicants. So I have taken this card, just I will take, I will drag and put average work experience into this card.

So 6.30 year is the average work experience, right. If I want to know the average work experience for a male candidate, right, and female candidate, so I have taken one second I will take a card and then I will click here and take another graph. So this another graph has come. So by gender I want to know. So this average work experience I will put into the y axis and gender that I will put into the x axis.

So, I have got the another graph that is telling average work experience by the gender. So, now you can see 7.50. So, male are more experienced than the female that is what this data says. So, this is the dummy data that I am clearly so many times I have explained this is a dummy data.

So, now if you want to know this gender wise you have seen now you want to know city wise. So, again you can calculate again you can select the graph from here. So, bar graph that I have selected city wise average that I will put into the average work experience I will put into the x axis sorry y axis and x axis. X axis I need to put the city if I want city wise right. So city wise work experience that you have got next if I want to know department wise right.

So I will select again new graph put average work experience into the y and department into the x. So you will get department wise average work experience. If I want to know education wise right, so I will select again new graph right and department I will education that I will put into the x, average work experience I will put into the y right. How to beautify this? Graphs that I already explained go to this format your visuals whatever changes that you have to make. So in a visuals you can make it here right x axis y axis right data levels right if you need to make it on just you click on on so that all data

levels will come here right these all data levels has coming right.

So, just I need to click on this right. So, that is how you can format. In journal you can go and then you can see the title, effects, header, tool tips and alt text right. Whatever change that you want to make it here just select accordingly and you can make the changes in there. So, what are the things that we have calculated? Average experience by gender, average experience by city, average experience by department, average experience by the education.

So that is how you got this data. Now you can tell a story about the average work experience from all aspects, education, department, gender, total and city that average and then you can make a decision related to it. Next variable if you are interested in expected salary, right expected salary that is there that they have expected from you right. So, I have taken a new worksheet just click on this change the name. So, salary if I want to do what is their expectation expected salary.

So, again I will click on this new major. So, new major has come. Salary that is what I want to know so equal the way we create the formula in excel so average salary right so now I have to calculate so I have create right calculate average salary so I have to calculate the average. So I have calculated click the I wrote the average then average will come now salary so now I need to see the salary where is the salary. So age is there, attrition is there, city is there, department is there, interview date is there, salary is coming in K, K means 1000. Now I have selected, I will close the bracket and just press the enter.

So now you can see here average salary has come. So similarly the way have we have created the graphs for other variables similarly we can create the graphs for salary also. So let us start first we want to know what is the average salary that all participants are expecting. So I have clicked on this card an average work salary that I have taken from here and dragged it and put it into this card. No, no this is the work experience.

So I need to remove this one. So just I have removed, I have selected again this card, put it average salary into it. So this is the average salary 269, 269K is the average salary. So you can see here this is the data which is telling average. if I want to know average salary which is demanded by the male and female.

So, similarly we can create. So, I have taken the bar graph right. So, x axis and y axis are there. So, in this y axis that I have put the average salary and gender that I have put into the x axis. So, now I got the average salary by x.

Now, I want to format the visuals. So, I have gone to this format your visuals, go to this data label on. So, you will get the moment I will on it and then you will see this average. So, average salary which is demanded by the female employees that is higher than the male employee, interesting. So, that is how you can get the gender wise. Now if you want to know the average salary by education wise, right? So first you put this average salary, average salary that you need to put into the Y and education that you need to put into the X.

So now you can see this average salary is coming. Again you can go to the formatting, you can just on the data level, so data level will come here. So now you can see that PSD people are asking higher salary than the PG and the UG. So highest salary is asked by or demanded by the PSD people, whoever have completed the PSD, data labels that is what you can see. And in general you can change the title effects if you want to change the title so once you will click on it so every salary is coming so whatever name that you want to give it bolded italic underline whatever you want to do it that you can do it from here right. So next that you can see that education wise that we have done.

If you want to know department wise right so I will select again graph right so I have selected again so X and Y axis has come so I will put average salary into the Y right and department that I will put into the x. So the moment I put it, it has come in this way, right. So you get the average salary by department wise also. You got department wise and education level wise also. So all four graphs that you can do the setting and next that you want to know department city wise.

City wise also you want to know. So the city also has come. So x and y axis. So select this. Average salary put it into the y and city selected and put it into the x you will get the average salary y city wise also. So now you got the all demographic variables and numbers you made it the bar graphs entire data related to the average salary is there. One more now it is up to you all variables are there so source of application that you can use it.

Next that people who are coming for the interview for them also you can create it. So let us let me create for source of application also. So from which source people are asking for more salary, right? So I have created so average salary that I will put into the Y and then source of application I will put into the X. So the moment you will do it, right now you format your visualization and go to this, data levels, click on, right, so now you can see newspaper. People who are, who have applied through the newspaper, people who have applied through the newspaper, they are asking the highest salary and people who have applied from the website, they are asking the lowest salary, right.

So, now you have to do the analysis and then you can understand. So, that is how you have made the all graphs here. All graphs that you have made it. Now you can tell a story about the average work experience or you can make a story about age. You can make a story about the count.

So all graphs are in front of you. Based on this, you can write a report. Based on this, you can make a presentation. And based on this, you can ask questions to yourself. You can ask the all questions to yourself and then you can put it in front of the management. And whichever question that you are not able to answer through these graphs then what do you have to do? You have to collect the data and you have to put it into the excel sheet and then make a graph that is the one thing.

Second thing if you are unable to answer the questions then think with the available variable can you do some calculation with these variables and then can you answer it, right? Can you answer it? For example, you have to calculate the average, whether you have to calculate the standard deviation, you have to calculate, you have to do the some other calculation, addition, deletion, subtraction, division, all these things that you can do it like the way you do in the excel and then you can transform your data and then you can answer those questions. So, how you have to do it? For that you have to select the new majors, the way I was selecting this average, similarly you can select addition, subtract, subtraction, some division and then you can create another variable right. So new variable will be new major will be calculated and right side under the data you will get that variable and after once you got that variable and then you can use that variables in order to do the calculations right. So dear participant in this session we have learnt how to select the interest variable. So, first I have selected this count, age, work experience, expected salary and then one sheet that I have used for age, one sheet that I have used for, I have used for some other things right and some like variables like expected salary, variables like age right and then I have created the various types of the graphs.

So, similarly you can identify what is your interest variable and then you can make such kind of graphs and make a decision. And important thing is first you need to select the questions what type of questions that you need to answer accordingly you can select the graphs and you can make a report presentation by making such kind of dashboard through the Power BI. Thank you.