Marketing Analytics
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Social Network Analysis and Excel Dashboards (Contd.)
Lecture 65

Welcome to Marketing Analytics course, this is Doctor Swagato Chatterjee from VGSOM IIT Kharagpur who is taking this course for you. We are in week 12 and we are in the last session and in this session I will discuss with you, discuss with you something called a Dashboard.

So dashboard is something that we have learnt in our college days, sometimes probably in our, while working in the organization also, you have all seen dashboards. But often times, to create interactive dashboard we have to take help of some tools and some BI tools or some other software that are available online like TabView or QuickView or Power BI.

In this class, in this particular video I will be trying to show you how a simple dashboard can be made using Excel itself. So we generally have this kind of a data, which I am just opening the data.

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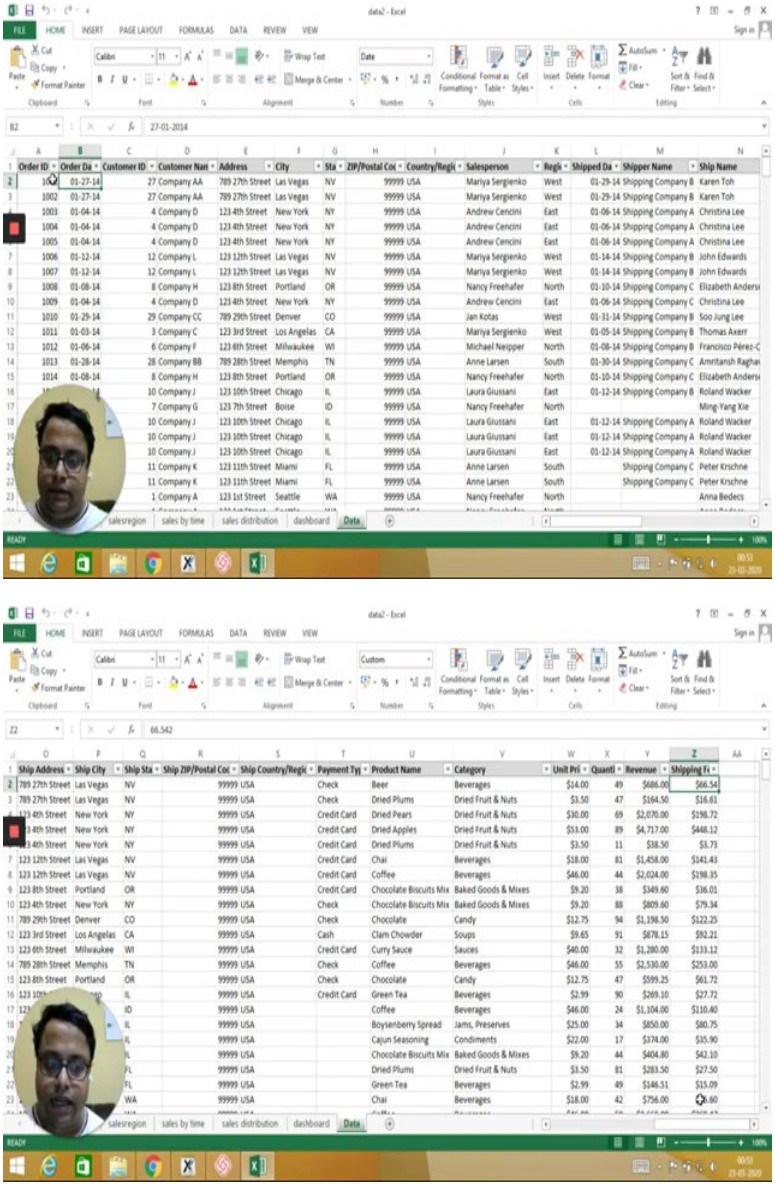

So this kind of a data we have. So here this data that you see, here each row in the data is basically one order and in this order, we have various details about the order. We have the Order Id, we have the Order Date, we have the Customer Id, we have the Customer Name and place, City and then we also have the Salesperson name, the Region of the salesperson, we have the Shipper name, the Shipping Date and Shipper name, Ship Name. We also have certain other details like the Product Category, Product Name, Unit Price, Quantity, Revenue and Shipping Fees.

Now this kind of dataset we can really download from SAP Systems or CRM systems that we have in our organization. Now once this data is downloaded we generally sometimes have to create regular dashboards or reports for our managers. Now in this particular video we will

be showing that how those reports, without the help of MIS or IT team, without the help of the BI tools how we can do this kind of reports using our Excel itself.

And we have to understand that Excel can handle up to 6 lakhs data, on and off 6 lakhs data points that means data rows it can handle and when there is text data it becomes further more difficult for Excel to handle it. So we have to find out that what we can to do to tackle this kind of problems in the Excel dataset.

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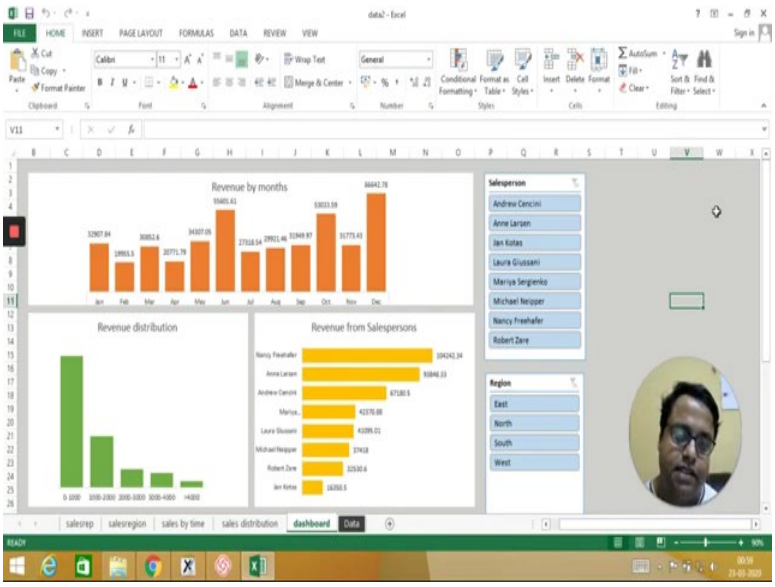

Now the dashboard that I have developed here and looks something like this where Revenue by months are there, if I just remove this thing to this right side you can see probably better. Revenue by months are there, revenue distribution that means the ticket size is there, this is the ticket size distribution so how many, 1 to 1000 dollars how many orders are there, there 218 orders are there.

And then 85 orders are between 100 to 200, see there is a 85 number coming as value. Then 200 to 300 there are 31 orders so most orders are of low value. As we go ahead for the high volume orders, high volume orders are much less required and this is something which is expected.

This is the monthly revenue. Can you see certain months where there is jump, there is a spike. So I can see in October and December there is a spike and then also there is a spike in June. So dashboard, when you develop a dashboard, first important thing that you have to keep in mind is what is the purpose of dashboard?

So in analytics we have done various kinds of tools and techniques but in basic business analytics when we use certain terms which are called like exploratory analytics or descriptive analytics and then diagnostic analytics, predictive analytics and descriptive analytics.

Now the descriptive analytics actually tries to find out how I can create certain insights from the data, some basic insights which can be used in the diagnostic analytics to further create certain idea about the data or certain checks, certain hypothesis about the data. So that is where the descriptive analytics comes in.

So majorly to create certain hypothesis, create certain hunches, create certain kind of thought processes inside the mind of the data cruncher or data analyst so that we can further check, further deep dive and check and find out what is the reason. For example we say, you have come from, let us say Italy and you are coughing like me right now. Then what will happen?

So the doctor will see you or somebody will screen you and then ask you to take a test. Now why will he give you the test? Because he has a hunch, from the descriptive analytics of the various people who are coming for the last few months they have observed, they have a hunch that probably people coming from these kind of countries might have a Corona virus.

Now that is a hypothesis and they will check that hypothesis with you that whether you have a Corona virus or not. Null hypothesis is that you do not have Corona virus. Alternative is you have a Corona virus and then they will try to find out whether you have it or not. So similar kind of things we also do. Now in this particular context why I am saying this is that you should also create charts which can lead to further probing.

A dashboard which is just made without any, any excitement, without any further information, further ask for further probing is a boring dashboard and those kind of dashboards are generally made in the industry which does not give any new information, which is always sometimes some things are known and we do not call for further new probing.

So you have to create dashboards switch on undulations, which has curves, curves are good to see, which has curves, which has undulations, which will trigger to inquisitiveness of the observer. So that is something that you have to make it sure that happens. So in this context if you see we have a jump in October and in December. So if I ask you why? So probably October is the festive season, December is also festive season.

In USA, October is probably the Thanksgiving, December is probably the holidays, the winter holidays so we just check the Thanksgiving part.

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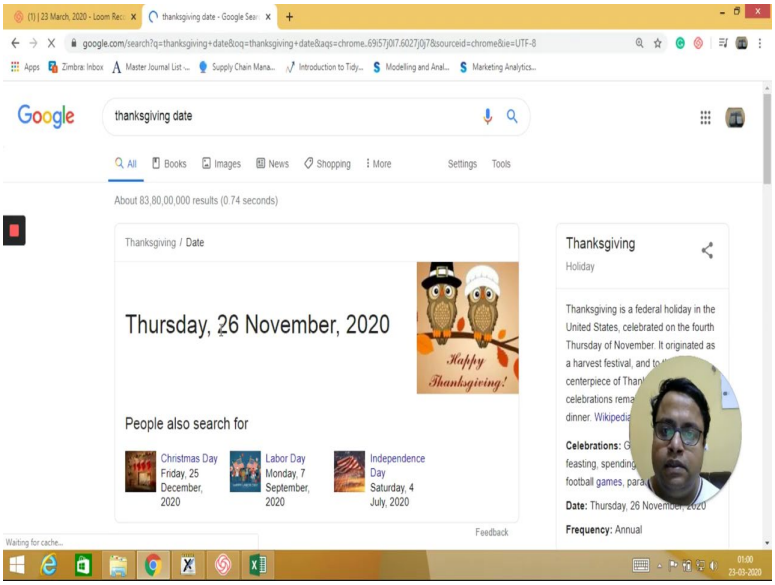

Thanksgiving date if I search it, which is on 26 November, so probably people start preparing from October. I am not sure why, what is there exactly in October. So let us just also search for October important days or October holidays. So that will be a better way of getting an idea that what is happening in October.

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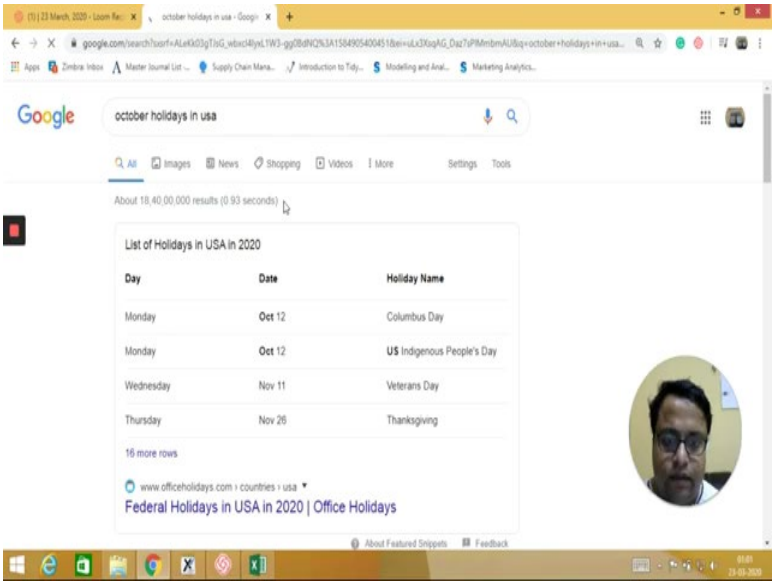

So October, I have searched this, October holidays USA, so what holidays are there in October? So there is US Indigenous People's Day or Columbus Day. Why I am not sure whether there are such important.

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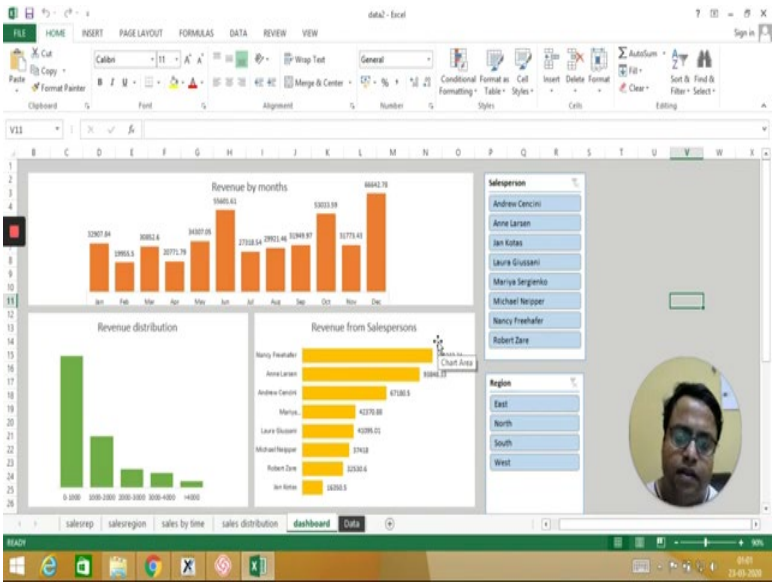

But we can see certain jump in October, and also in June. June, why June? May be summer, summer is a season where people get excited, interested and so on. So we have to check that if summer is the one of the major reason of the jump in June. I can understand that these things are related to some festival but here there is a jump because of summer then where, in which part of USA this summer will be more prominent?

Do you think that the consumption pattern, consumption in let us say, in spring and summer or in winter and summer, in January and June let us say the temperature difference between January and June, will it be more prominent in the Northern region or in the Southern region?

You can think about India also. The similar pattern will come up that in India also that summer becomes more prominent for consumption only in the Northern region, or in the winter-oriented region where it is cold in winter and summer is pleasant. So that is when people go and travel, they are people who consume lot of things there. So I should be able to see a higher jump in June.

If the hypothesis of summer is correct, that summer is leading to this jump then I should be able to see a higher jump in North than in South. So that makes sense. So these are filters.

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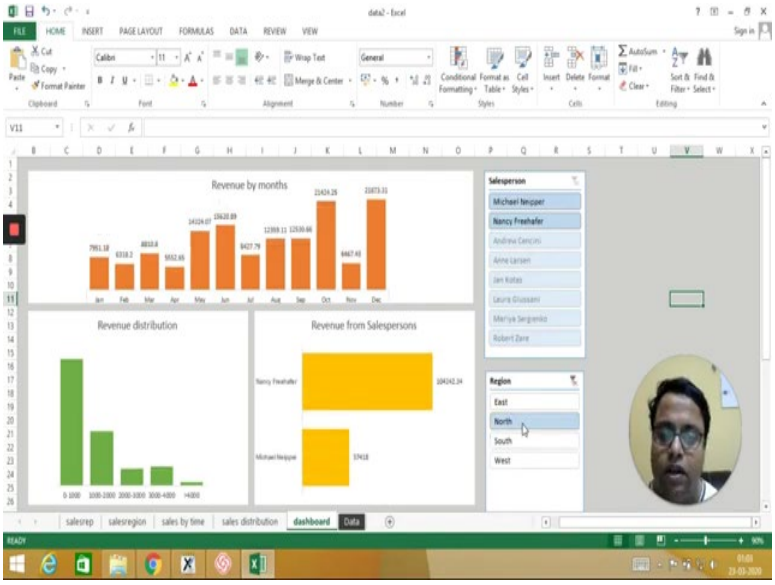

If I just select North the whole dataset gets values only for North. So you will see that North, the jump is high but May and June, both the jumps are there but not very. What about about South?

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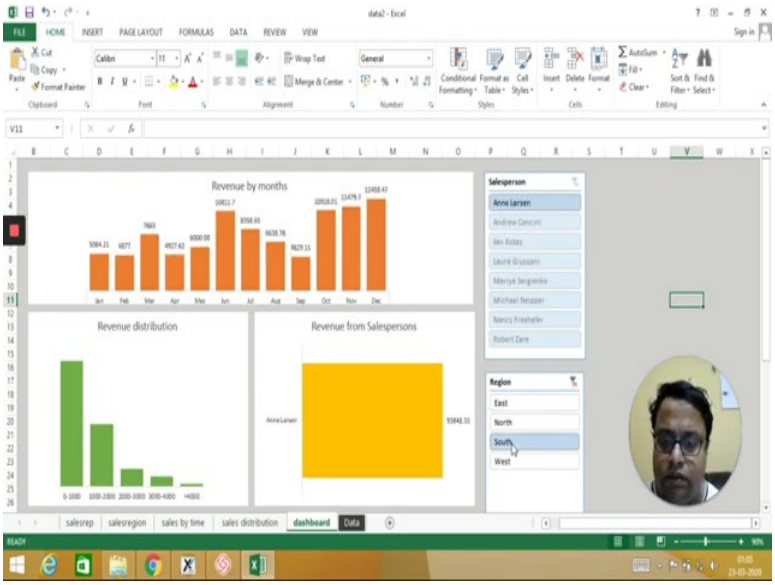

In South I think the jump is pretty high. June, July, August so I cannot probably say that in the some place there is no jump. So probably summer alone is not the only reason why this jump is happening.

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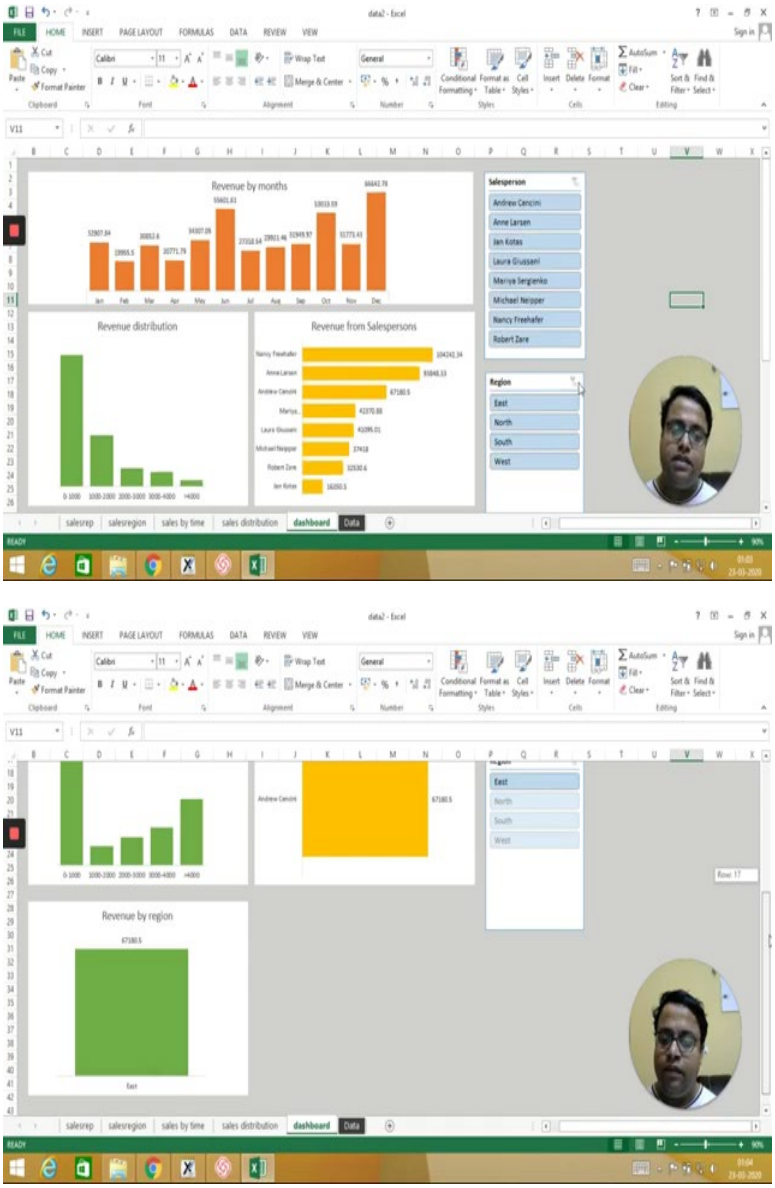

There might be other reasons which are related to the salesperson, related to the you're your temporal marking and etc. Then I can also create filters based on salespersons. Let us say I want to see what Andrew is working with. If I choose Andrew, then I can find out that okay so this is how Andrew works. Andrew also gives lots of sales in Jan, June and December and also in January which is there, and most of the Andrew's consumption is in the lower side and he also gets quite a few big ticket invoices as well and he works in East region.

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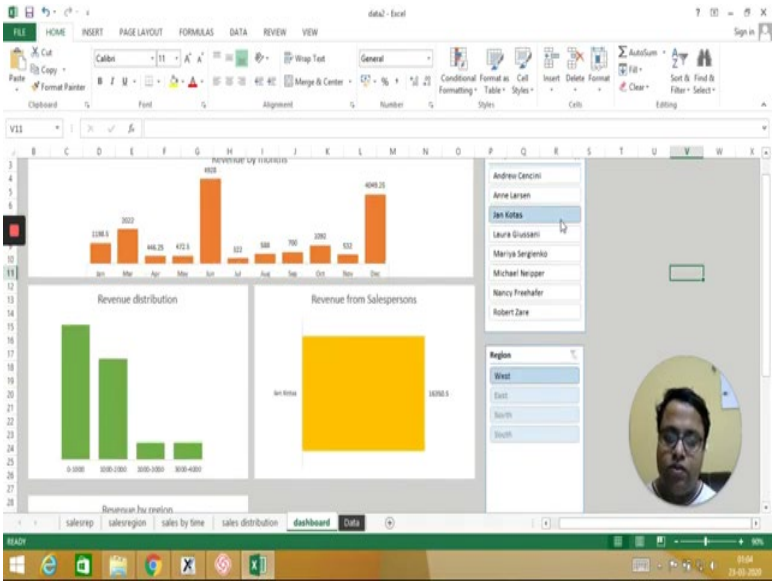

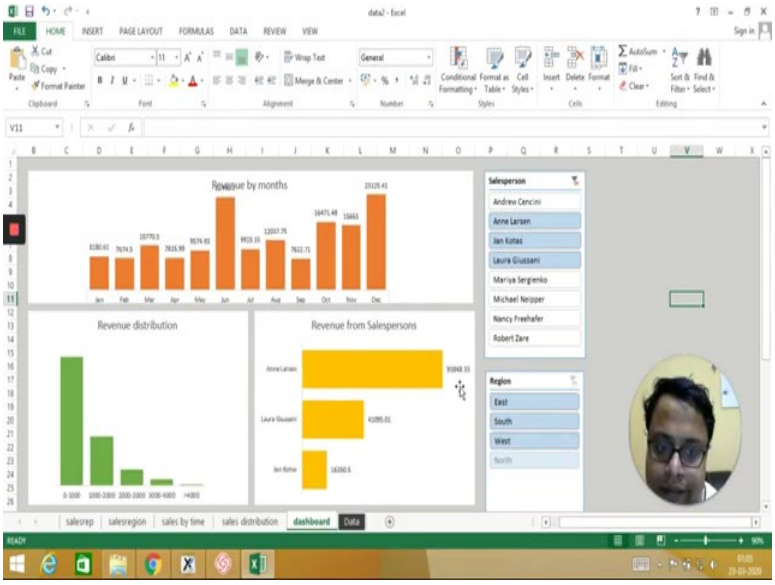

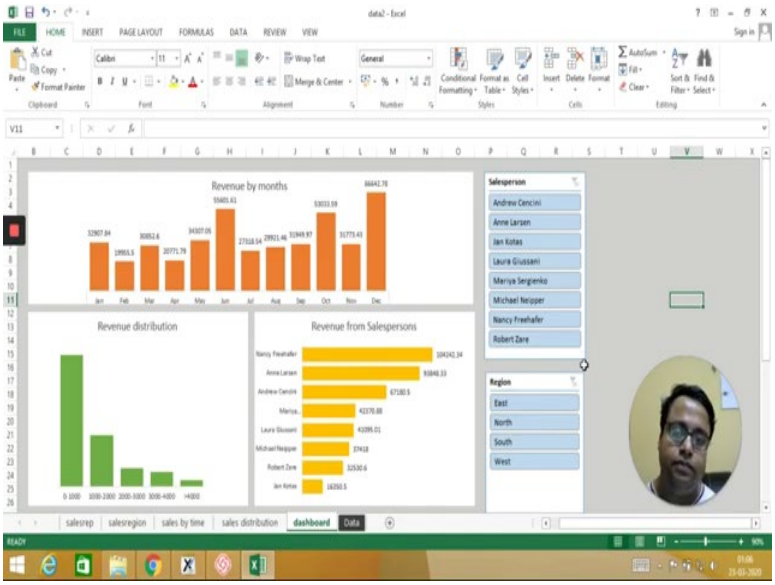

On the other hand if I choose Jan Kotas who works in West, if I choose Laura who works in East so let us just try to see that what happens if I select more than 1 guy. So Jan Kotas and Laura and Anne let us say. I can select 3 also. So Anne is giving 93000, Laura is giving 41000 and I can only compare the situations.

So basically these are filters and this is your graphs. Now I am giving you some hunch of what kind of information can be created. You can select multiple regions or multiple salespersons. You can bring in other filters also.

In the next video I will be showing you how to actually create this particular dashboard from scratch. So I hope you have understood that why this kind of dashboards are important? Because ultimately they lead to certain kind of questions, questions which are, which leads to further probing and that kind of information is needed, to do predictive or diagnostic analytics that we have been doing in the last few sessions or probably the whole class itself.

So before we go to that we should start with this kind of a exploratory analysis and something that I want to show you and in the next video I will show you how to do it. Thank you very much, thank you for being with me. See you in the next video.