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SOFTWARE

On-Demand Training:
Filtering for Top and Top N
Transcript

Welcome to this video on filtering for Top and Top N. You can download the Exercises workbook to follow along in your own copy of Tableau.

Filtering for the Top 10

If we want to filter for the top 10 products by sales per region, this analysis can be interpreted two ways

1. Of our overall top 10 products, how do those 10 rank in each region?

   or

2. In each region, which are the top 10 products?

The first is fairly simple, and is shown here. Right clicking on the filter and selecting Filter, then clicking to the Top tab, we see this is Top 10 Product IDs by sales.

But if we'd been trying to answer the second scenario, "in each region, which are the top 10 products", we may be tempted to build the view we have here, then to put Region onto filter and select whatever Region we're interested in.

However, this view appears to be giving incorrect responses – despite the fact our Product ID filter says top 10 by Sales, we only have 7 rows. This is really a matter of how the filter is being run.

- If you're familiar with SQL, filters are written in the WHERE of the query clause via an AND statement.

- Records need to meet all criteria to be returned –

   - For the bar chart here on top, results need to be members of the top 10 of all Products by sales

   - And If we also filter by Region

   - Products ALSO need to be sold in that Region

   - If 3 of the top 10 aren't sold in the West, the overall result subset will only contain 7 products.

- This addresses the second scenario

- To filter for the top 10 products in the West alone, the setup is a little more complicated.

   - We need to let Tableau know that the Region needs to be considered before the Top 10 is calculated.

   - We could put create a Region context filter, but that isn't very easily changed if we want to look at East, then West, etc.

Top 10 Across Dimensions Using INDEX()

If the analysis calls for the top 10 products in the each region individually, this can be done using the INDEX() calculation to set the rank of each Product based on its Sales within each Region. This essentially removes that AND criteria from the filter and it will use the rank instead.

- Right click in the data window and select Create Calculated Field

- We'll name this "Rank"

- In the formula area, type "INDEX()"

- Click ok

- Find the new field, Rank, here in the data window. Right click and select "convert to discrete"

  - This step is vital

- Bring Rank field between two relevant fields in the view – here, we'll put it between Region and Product ID

- Right click on the Rank pill and select "Edit Table Calculation"

  - This is where we'll tell Tableau how to calculate that Index – in other words, how we want the ranking to be assigned

- For Compute Using, select "Advanced"

- Bring Region and Product ID to the addressing box – make sure the field we want to bucket the rankings by, in this case Region, is at the top

- Set the Sort field to be Sales

  - As we want this to be our top 10 by Sales

  - And we want descending

- Click OK

- Here, set the "at the level" to Product ID

  - Because we want our ranks to be assigned per Product ID

- And set "restarting every" to Region

  - Because we want to recalculate the ranks per Region

Now that we have our ranks properly assigned, we need to set up our filters. There's a couple things to consider:

- Bring Region to filter and we'll select West

  - If we don't filter by Region first, we won't be able to filter by Rank because the Rank calculation depends on Region

  - That is to say, there are potentially four Products with #1 Ranks – one per Region. We have to tell Tableau which "restarting every", or Region, we want to look at

- Bring a copy of Rank from the Rows shelf to filter by holding down the control key while we click and drag

  - We edited the table calculation on this pill specifically, so we have to bring a copy of this pill to the filter shelf

- and we'll select 1-10

- and let's sort this.

Now, because of the fact Rank is calculated per Region, we get the top 10 selling items in the West. If we wanted to

change which Region to look at, we can simply add a Quick Filter.

For more information on using INDEX, check out the Why is Tableau Doing That video on Fixing Incorrect Sorts with Index

Parameters with Top

What if, instead of tying a filter for the top 10 or 20 Products , we want to filter for the top N, letting the viewer set the cutoff? This can be done with the Top option for filtering dimensions and a parameter.

- We drag the field we want to filter, Product ID, to the filter shelf

- and click on the Top tab.

- Here, we click "by field", it's already set to SUM of Sales,

- and instead of hard coding in 10 here, we'll click and select "create a new parameter".

- We'll call it Top N, and leave everything else as it is.

- For more information on Parameters, check out the Parameters video.

The parameter control is automatically added to the view, and we can adjust how many products we want to see simply by dragging the slider.

Conclusion

Thank you for watching this Filtering video covering Top and Top N. There's more information about context filters, and more in the Additional Topics in filtering video, or we invite you to continue with the other On-Demand Training videos to learn more about using Tableau.