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DATA ANALYTICS WITH IBM COGNOS ASSIGNMENT - 4

Challenge: Create calculations and LODs using Global Dataset in Tableau

Calculations:

1. Model: Trend line and Reference line with the average

The image shows two overlapping dialog boxes from Tableau. The 'Trend Lines Options' dialog is on the left, and the 'Edit Reference Line, Band, or Box' dialog is on the right.

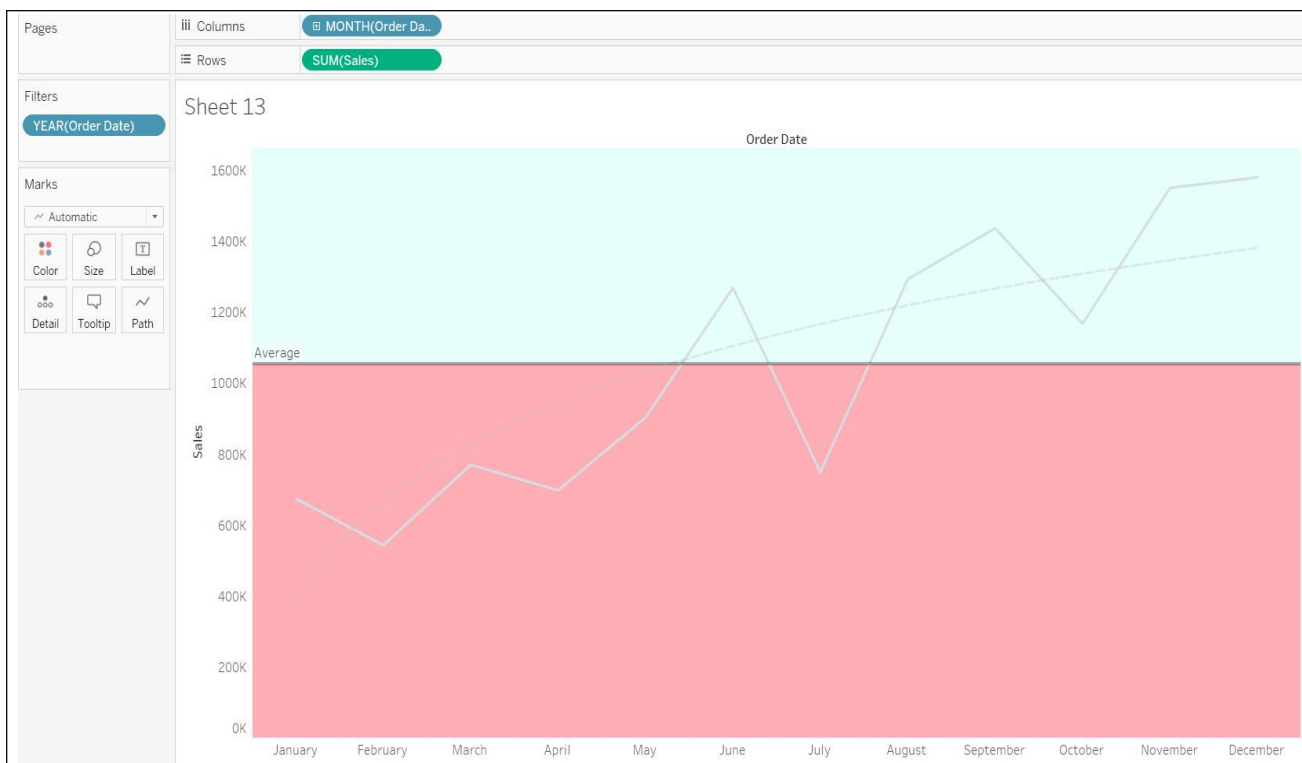
Trend Lines Options Dialog:

- Model Type:** Radio buttons for Linear, Logarithmic (selected), Exponential, Power, and Polynomial. A 'Degree' field is set to 3.
- Factors:** A section titled 'Build separate trend lines based on the following dimensions:' with an empty list box.
- Options:** Checkboxes for 'Show tooltips' (checked), 'Show confidence bands' (unchecked), 'Allow a trend line per color' (checked), 'Show recalculated line for highlighted or selected data points' (checked), and 'Force y-intercept to zero' (unchecked).
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

Edit Reference Line, Band, or Box Dialog:

- Line Type:** Radio buttons for Line (selected), Band, Distribution, and Box Plot.
- Scope:** Radio buttons for 'Entire Table' (selected), 'Per Pane', and 'Per Cell'.
- Line:** Fields for 'Value' (SUM(Sales)), 'Average' (selected), 'Label' (Computation), and 'Tooltip' (Automatic).
- Formatting:** Fields for 'Line only' (selected), '95' (selected), 'Line' (color), 'Fill Above' (color), and 'Fill Below' (color).
- Options:** A checked checkbox for 'Show recalculated line for highlighted or selected data points'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

Visualization:



2. Model: Used SUM(Quantity) Quick Table Calculation>Percentile Quantity>Filter>Range from 0.2 to 1

This implies we are selecting only from the range 20% to 100%

Filter [Percentile of Quantity]

Range of values At least At most Special

Range of values

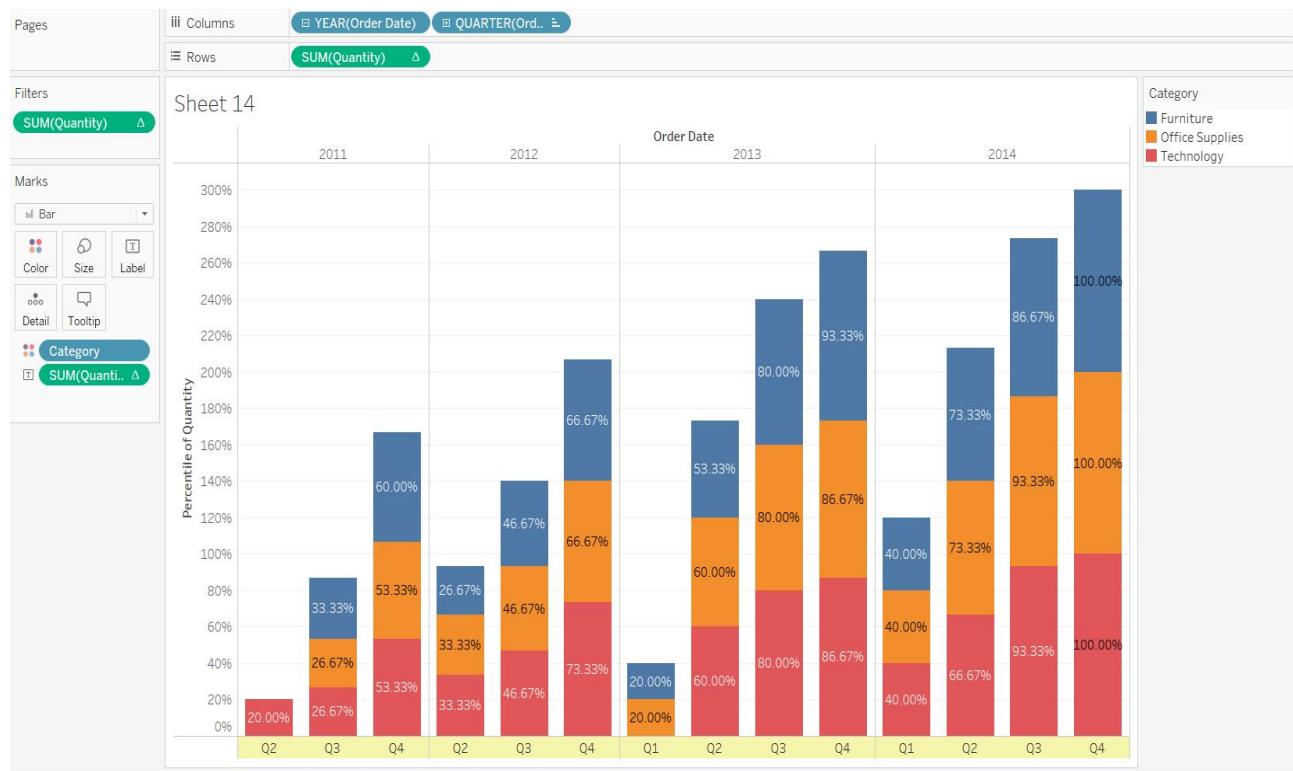
0.2 1

0% 100%

☐ Include Null Values

Reset OK Cancel Apply

Visualization:



Level of Detail (LOD):

1. Model:

LOD Expression:

```
IF(AVG([Sales])>500 AND AVG([Profit])>50)
THEN 'Accept'
ELSE 'Not'
END
```

acc or not

IF(AVG([Sales])>500 AND AVG([Profit])>50)
THEN 'Accept'
ELSE 'Not'
END

The calculation is valid.
1 Dependency
Apply
OK

Visualization:

Pages

ColumnsMarket

RowsSub-Category

Filters

Sheet 10

AGG(acc or not)
Accept
Not

Marks

Automatic

ColorSizeText

DetailTooltip

AGG(acc or not)

AVG(Sales)

AVG(Profit)

Sub-Category..	Africa	APAC	Canada	EMEA	EU	LATAM	US
Accessories	182	266	235	184	361	215	216
	28	23	68	15	74	41	54
Appliances	426	910	496	443	883	564	231
	25	125	140	20	149	81	39
Art	62	94	66	55	112	68	34
	6	11	15	2	21	11	8
Binders	36	66	50	38	76	44	134
	4	11	13	4	15	5	20
Bookcases	426	809	441	413	751	470	504
	37	108	103	36	117	39	-15
Chairs	306	528	267	279	492	323	532
	15	64	71	-2	43	31	43
Copiers	467	759	574	422	785	503	2,199
	68	124	205	43	121	65	818
Envelopes	47	84	57	46	91	62	65
	7	8	17	4	20	9	27
Fasteners	26	42	27	27	47	30	14
	4	3	8	4	10	4	4
Furnishings	96	157	54	110	176	100	96
	11	25	8	6	30	0	14
Labels	22	31	17	19	34	22	34
	4	3	5	2	7	4	15
Machines	334	535	329	262	528	303	1,646
	29	75	47	12	41	17	29
Paper	66	88	89	50	96	61	57
	10	10	22	4	20	10	25
Phones	432	706	504	388	634	461	371
	67	118	134	10	66	48	50
Storage	164	264	212	153	259	177	265
	20	30	58	5	21	20	25
Supplies	59	101	77	63	119	71	246
	5	6	17	4	22	12	46

2. Model:

LOD Expression:

{ EXCLUDE [Segment]: SUM([Quantity])}

exc cat

{ EXCLUDE [Segment]: SUM([Quantity])}

The calculation is valid.

1 Dependency ▾

Apply

OK

Visualization:



As we can observe here in the first row we passed the segment in colour and in the second row we passed our new calculated field “exc cat”. That is the reason we are not having a specific segment in the second visualization because we have excluded it in the LOD expression.

3. Model:

LOD Expression:

```
{ INCLUDE [Region]:AVG([Profit])}
```

avg profit in region



```
{ INCLUDE [Region]:AVG([Profit])}
```

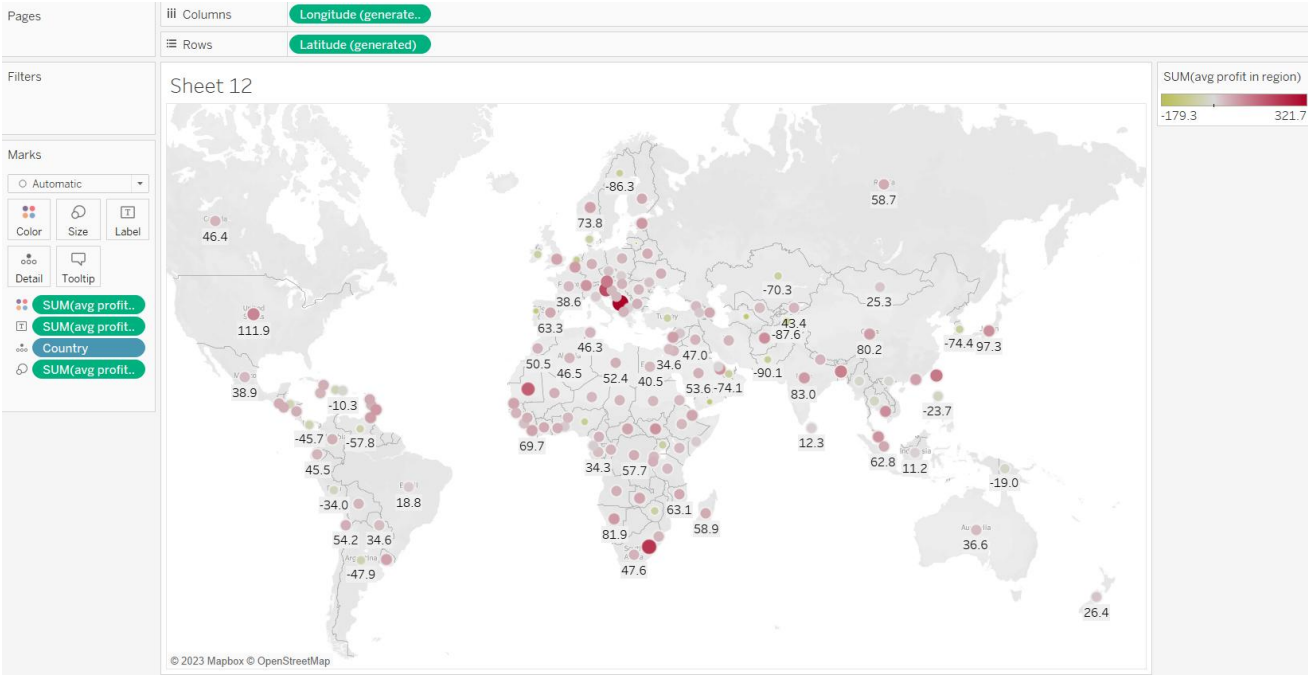
The calculation is valid.

1 Dependency ▾

Apply

OK

Visualization:



We are including the region in average profit where the default minimum value is -179.3 and the maximum value is 321.7.