Part 1 Visualization (Version 1.0 Date: 06282020)

Section 4 Intro to Tableau

- Office Supplies

All my Data science Files are located on GitHub:
Unix derivative users: clone -> https://GitHub.com/candy-o/DataScience.git
Windows users clone -> Download in Desktop requires "GitHub Desktop" or download Zip
(Mac O/S and Windows MSI)

Here are my Section 14-20 notes following the video stream to guide us.

Section 16. Navigating Tableau - Challenge #1.

Problem to Solve: "Management wants to know for fiscal year July-June, which three reps made the most sales in dollar terms in each region to qualify for a bonus, there are three bonuses one per region for these top sales reps".

Import P12-OfficeSupplies.csv into Tableau Public.

Measures and Dimensions sections are not labeled in Tableau Public but know where these sections are on the left.

Go to the worksheet Select Sheet 1 (bottom left tab area).

Data Tab is on left (sheet 1) on Right.

Dimensions and Measures are Roles.

Dimensions:

- Independent Variables put into categorical roles

Measures:

- Numerical dependent variables put into Numerical/Quantitative Roles

You can drag variables around between roles, between categories.

Dimensions: (Label Not shown in Tableau Public)
Item
Order date
Region
Rep

Measure Names

Measures: (Label Not shown in Tableau Public)
Unit Price
Units
Number of records
Measure values

Columns
Rows

Drag 'Region', then 'Unit' (2 dimensions) from data tab section into sheet 1.

Tableau Public did put 'Region' into rows but was supposed to also automatically put 'Units' into Label/Text under Marks where 'Units' is now summed up by region SUM(Units) and is now placed under Marks Label/Text: SUM(Units)

Since Tableau public does not do this, I moved 'Region' to rows: and 'Units' to columns: of which was changed to 'SUM(units)' by Tableau.

We now have a two dimensional table in Sheet1 and "We can tell how many sales there were in each region".

Tableau public step is done.

Move 'sum(units)' from Mark area to columns - now we have a bar chart.

Go to show me(right top icon).
Select pie chart.

Note that Mark area now contains:
Region
SUM(units)
SUM(units)

for pie chart.

Select bubble chart…

Notice Mark area changes to:
SUM(units)
Region
Region

Select Tree map
Notice Mark area changes to:
SUM(units)
SUM(units)
Region

Play around with various chart options, Mark Size change sizes, Cntl-Z to undo,...

Notice some options are grayed out, until more dimensions or dates are added.

Drag 'Order Date' to worksheet, Tableau Public drag 'Order Date' to Columns.

Now you can select the “Show me” Area Chart.

Columns: Year(Order Date)
Rows: Region
Mark:
SUM(Units)
SUM(Units)

Change Chart type from "highlight tables" to "area chart(continuously)".

Hover over 'Regions'.

Section 17. Creating a calculated field.

Q. Now which top region reps get the bonus? There are a total of three to hand out one per region.

Note: Using Mac? Some of these layouts may be different.

Tableau Public.
Drag 'Rep' to columns:
Drag 'Units' to rows: watch as Tableau changes 'Units' to 'SUM(units)' in rows.

Chart type is Bar.

Richard has sold the most.

We have three bonuses, let's break it down by region.

Drag 'Region' into columns before 'Rep'.

Now the chart is broken by region, inside every region is broken down by reps sales in each region.

Hover just above 'Units' on y axis and click the sort icon for sort "descending by sum of units within rep". Sort bars by size via Right click. Works in Tableau Public.

Now we know who sells the most number of units but we need the total dollar of sales per rep.

Need to find out the total dollar value of sales.

We need to calculate the Units times Unit Price.

Right click on measures in the Data tab background area.

In Textbox change default "Calculation" to "Total Sales".

In text area add/click Units * Units Price should end up looking like [Units]*[Units Price].

The calculation should be valid in bottom left - click ok.

Now we have Total Sales in the Data tab area under measures.

=# indicates total sales is a calculated variable.

Drag Data Tab measurements total sales and hover over rows measurements SUM(Units) and replace.

Note Richard is no longer the top sales person; Matthew, Susan and James get the bonuses.

Section 18. Adding colors

Use the mark color button to change colors…

Drag Data Tab Dimensions 'Rep' drop in colors.

Notice the legend (look under show me if you can't see legend) where each Rep has a different color.

Cntl z to get back.

Press control key and drag 'Rep' from column: dimensions to mark color button.

Colors use tableau purple grey pallet or color blind.

Press control key and drag 'SUM(Units)' from row: measurements to mark color button

Press control key and drag 'Region' column: dimensions on top of Mark area 'SUM(Units)' region should now replace 'SUM(Units)'.

19. Labels and Formatting

Press control key and drag 'SUM(Total Sales)' from row: measurements to Mark area Label button

Now sum of total sales appears on the bar chart and Mark area under region.

Now we can see each of the sales per region.

Click on mark area labels edit "SUM(Total Sales)" to "Sales: SUM(Total Sales)" click apply

Undo "sales:" in label and format labels.

Right click label region in Mark area to increase font to 12.

Change type of label.

Right click sum(total sales) format.

Label is on the plane tab not axis.

Change numbers to custom currencies, 1 decimals and prefix $.

Right click y axis change font to 12

Right click region/rep access and hide

Right click on central, (east, west auto format) region format axis font to 12

Right click x axis change font to 12 on Matthew the first Rep/column label and the other labels autoformat.

Go to worksheet change sheet 1 to "Annual Bonus Analysis"

Cannot export in tableau public so use cut and paste like snipping tool to export, add to your document. Example PDF and LibreOffice docs on github.