

# Process Financial Data with Tableau

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Environment: Win10 64 bit (Parallel Desktop on Mac OSX Yosemite 10.10.5 )

Tableau: <http://www.tableau.com/products/desktop/download>

## Project:

Datasets: <https://www.superdatascience.com/tableau/>

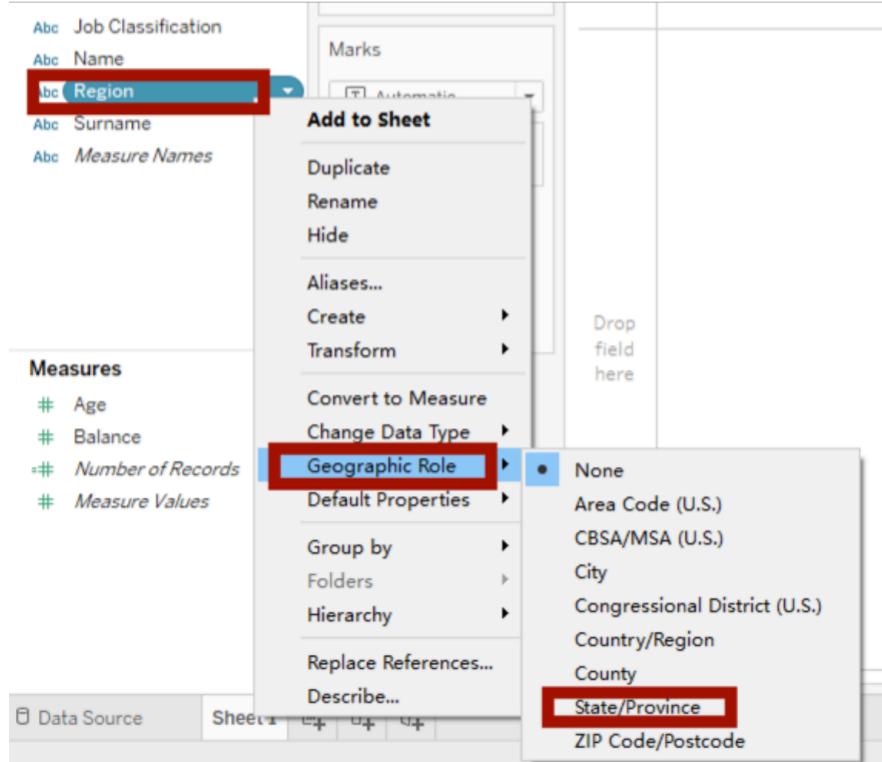
Download: [Bank Customers.csv](#)

Aim: Find the profit margin of each city.

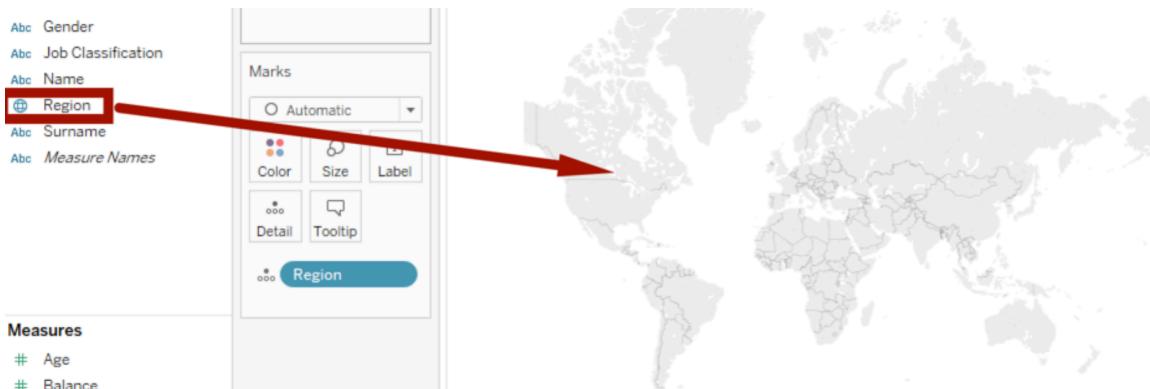
Part of the table:

Customer ID	Name	Surname	Gender	Age	Region	Job Classification	Date Joined	Balance
100000001	Simon	Walsh	Male	21	England	White Collar	05.Jan.15	113810.15
400000002	Jasmine	Miller	Female	34	Northern Ireland	Blue Collar	06.Jan.15	36919.73
100000003	Liam	Brown	Male	46	England	White Collar	07.Jan.15	101536.83
300000004	Trevor	Parr	Male	32	Wales	White Collar	08.Jan.15	1421.52
500000005	Deirdre	Pullman	Female	38	England	Blue Collar	09.Jan.15	35639.79

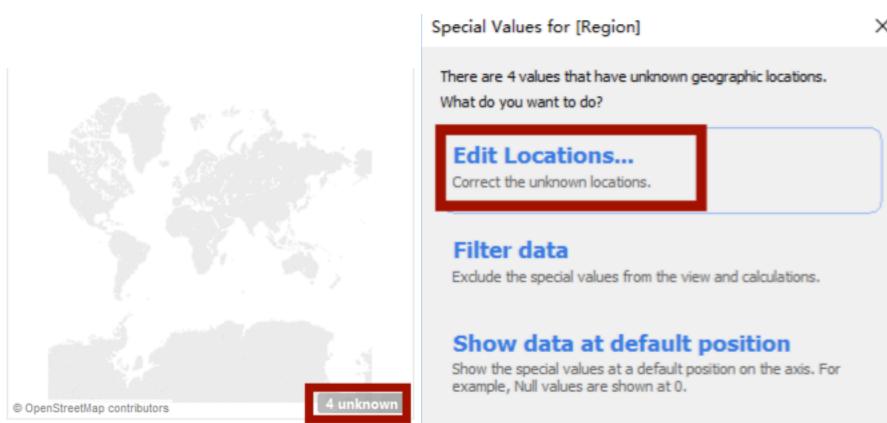
Open the file, but the problem is Tableau cannot understand where is England or Northern Ireland. The map is empty, so we need to change Region to Geographic role that Tableau can recognize. Just right click the **Region-> Geographic Role-> State/Province**. (The United Kingdom is made up of the countries England, Scotland, Wales, and Northern Ireland. So we choose State/Province, not country)



Now we can see the **Region** has a little global sign that it is a geographical sign. Drag the **Region** to the blank space of sheet1, we can see the map shows up.



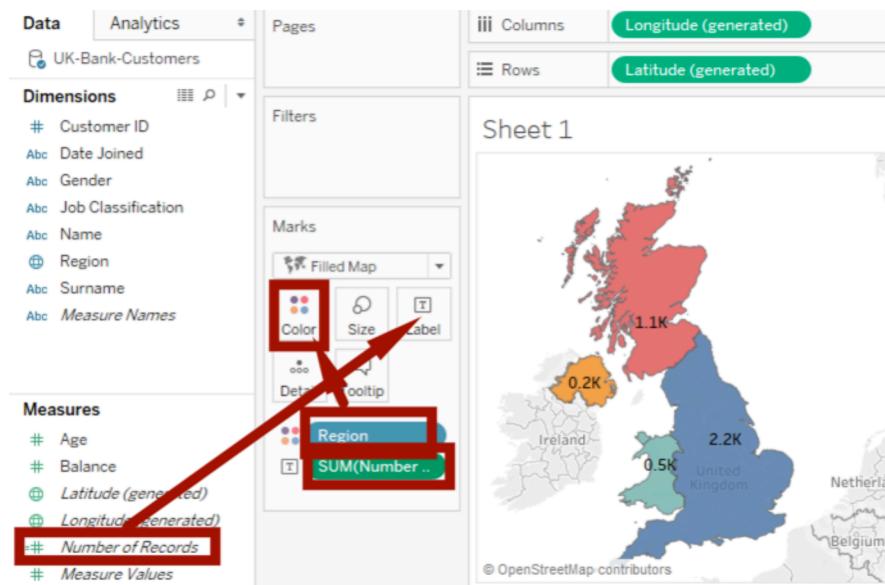
Go click 4 unknown, choose Edit Locations...,



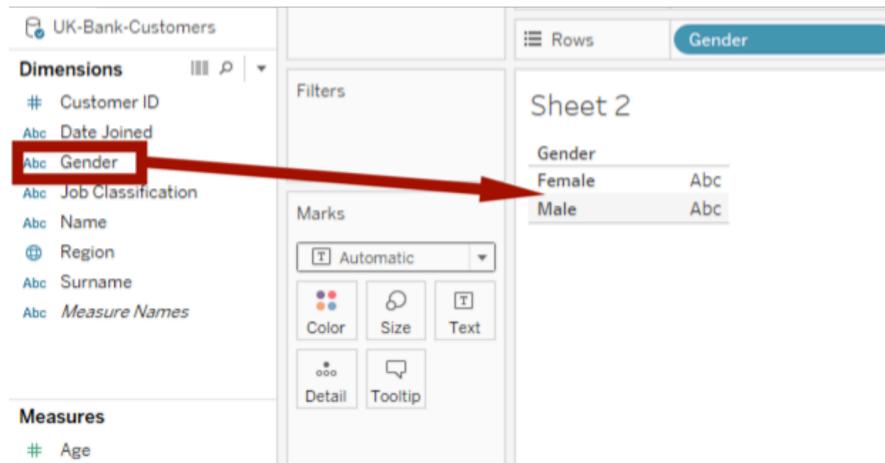
Then we go choose United Kingdom. Now the map is fixed. Go Marks, choose Filled Map, now we can see blue area.

The screenshot shows the 'Edit Locations' dialog and a map of the United Kingdom. The 'Edit Locations' dialog has 'Country/Region: Afghanistan' and 'State/Province: Region' selected. The map shows several regions labeled 'Unrecognized' in red boxes. The 'Marks' shelf on the right has 'Filled Map' selected. The map on the right shows the United Kingdom filled with blue, indicating the 'Filled Map' setting is active.

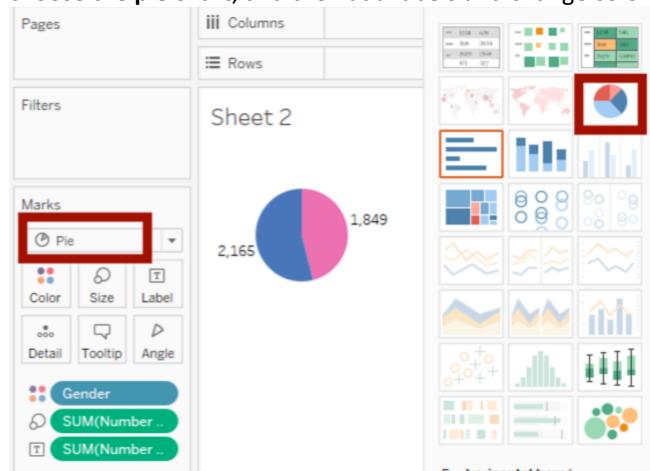
Now drag Region to Color, drag #Number of Records to the Label, and right click the SUM(Number of Records) to adjust the format of the records numbers.

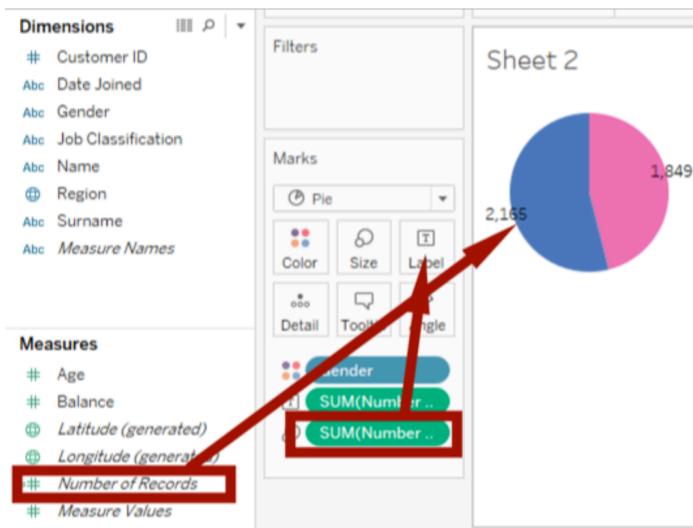


Now name the first sheet1 as Map, new another worksheet, just drag the Gender into the sheet and we can see the table with Rows of Gender



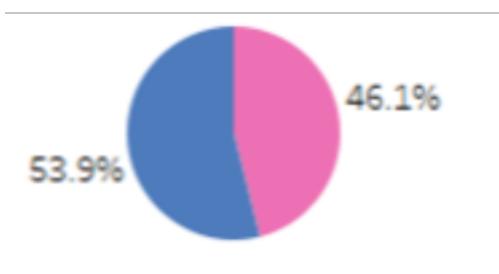
Attention: if you choose Pie in the Marks, it will show two circles. So we need to go to Show Me, and choose the pie chart, and then add labels and change color to make it prettier.





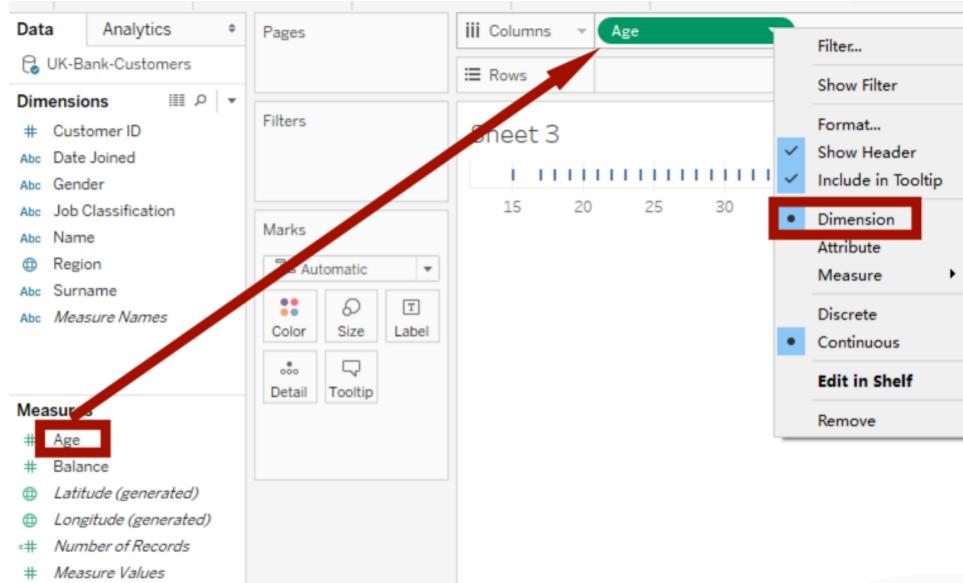
However, we are not interested into the numbers. We want to see the percentages. The quickest way is to right click the **SUM(Number of Records)** (with **label** sign), choose **Quick Table Calculation-> Percent of Total**. But we want to show like percent. Still right click the **SUM(Number of Records)**, choose **Format-> Number -> Percentage**

Now we have the female and male percentage.

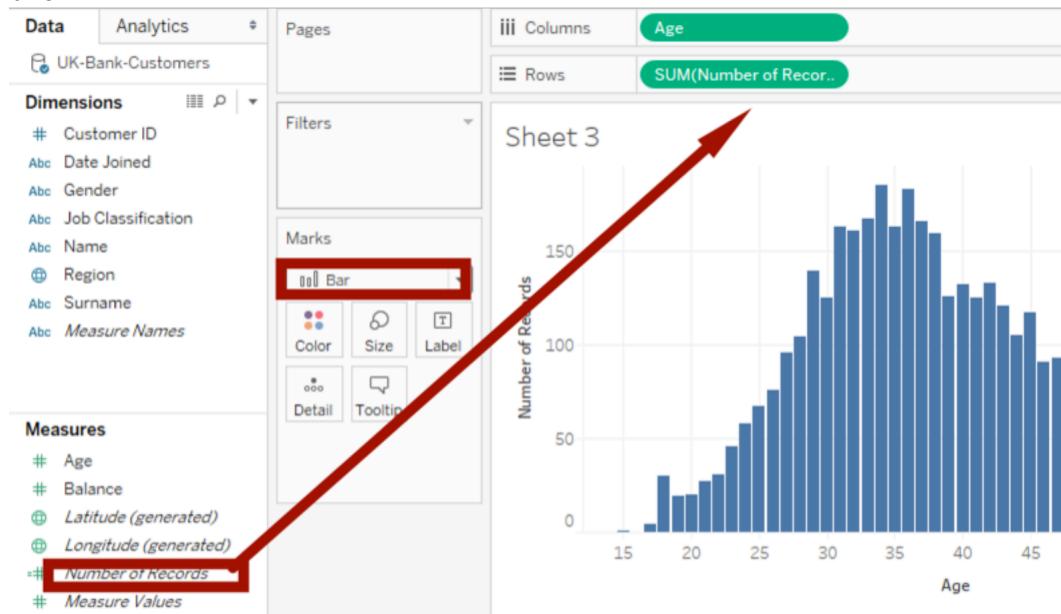


Now we want to see the age distribution of the record.

New a worksheet, and drag the #Age into the **Columns**, and right click the **Age**, choose **Dimension**, now we can see little lines (if don't choose Dimension, you might not see anything on the graph).

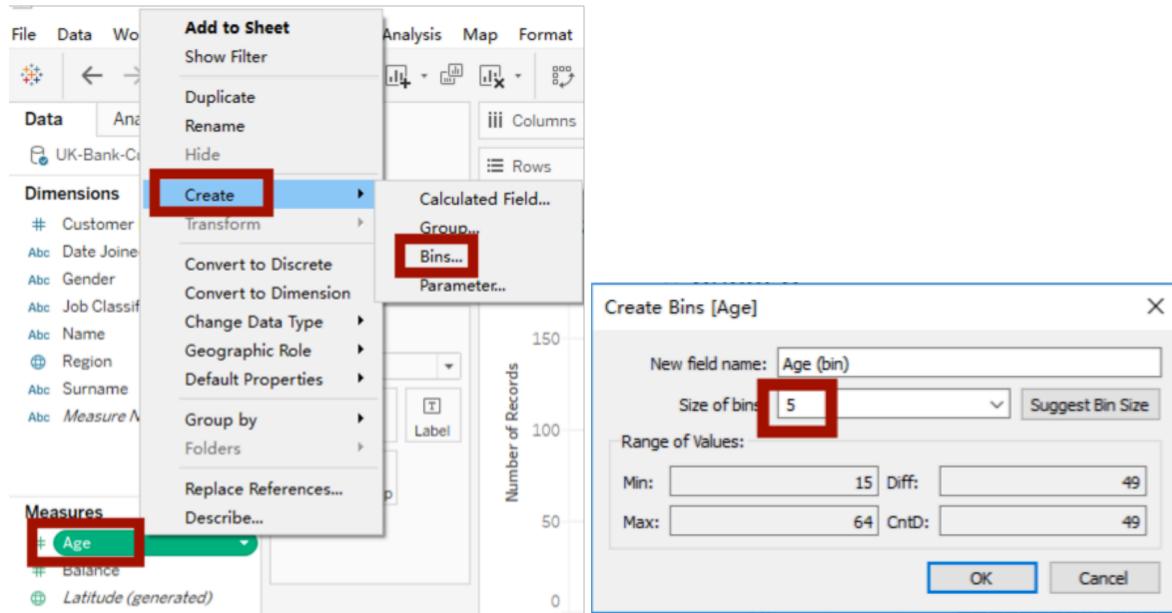


Now we add **Number of Recorders**. In our Bar graph, we notice age will show as individual year, such as 20,21,22. What if we need to show a range like 20-25, 25-30 or the age is not integer? Now we are using **bins**.

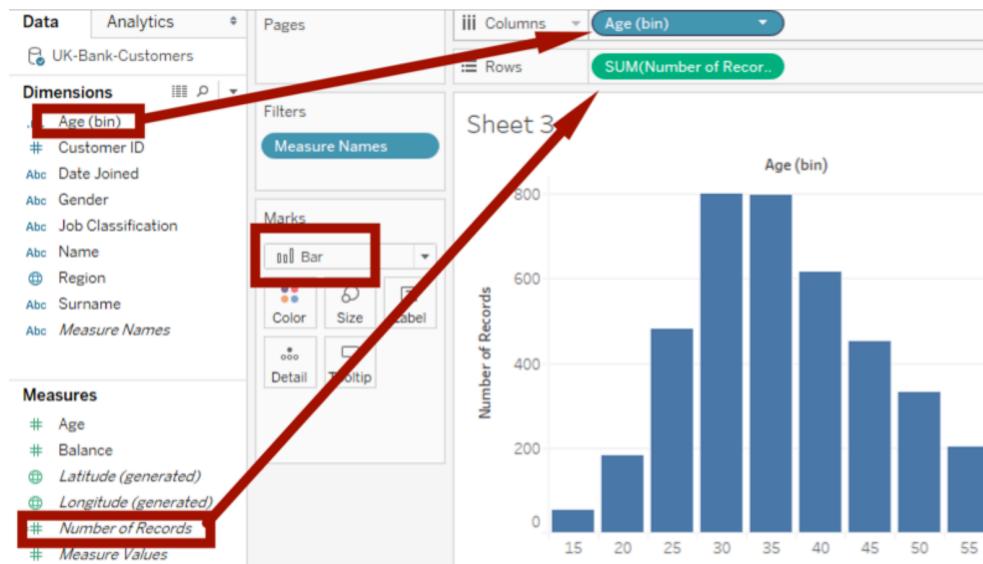


Now we clear all data and start over.

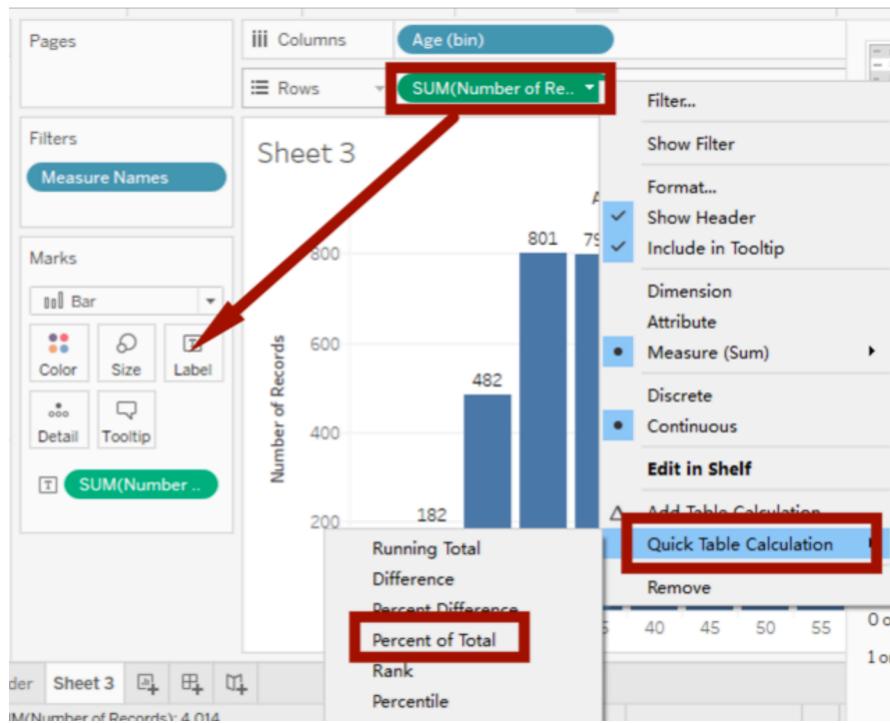
Just right click the **Age**, choose **Create-> Bins**. When the window pops up, choose 5, which means range is 5.



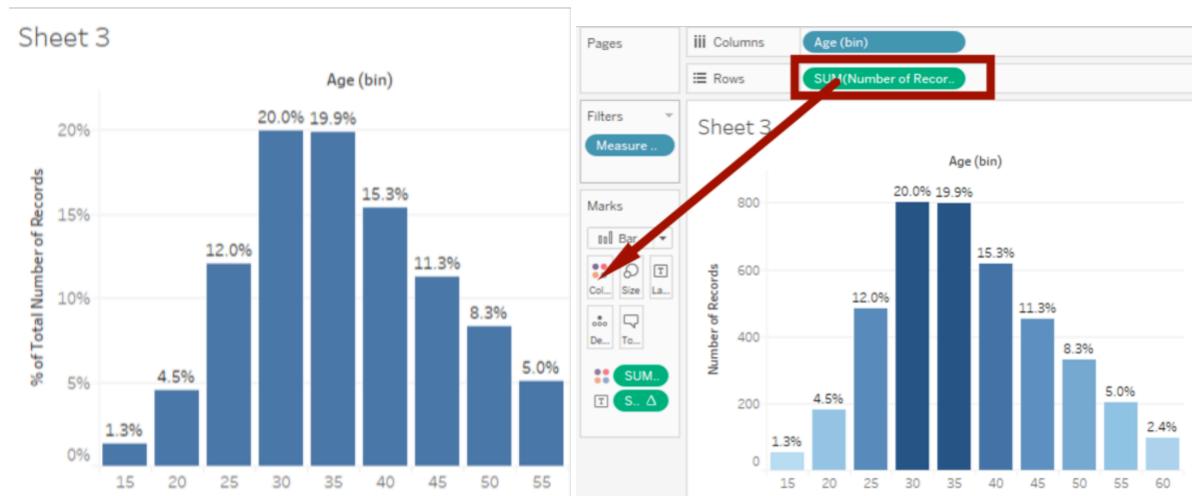
Now we drag **Age(bin)** into **Columns** and **Number of Records** into **Rows**, and also choose **Bar** type of graph.



Also, we need the percentage. We don't need numbers because in the geographical graph we already know the total numbers. So we need to calculate percentage. Press **Ctrl**, drag **SUM(Number of Records)** to the label till we can see the numbers on the top. Right click the **SUM(Number of Records)**, choose **Quick Table Calculation -> Percent of Total**. (If the number is not changing, go down to the **SUM(Number of Records)** in the Marks to do the same operations.) Like previously mentioned, we can change to percentage format.

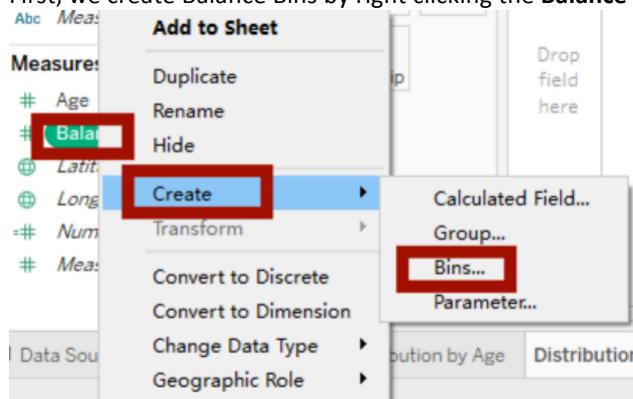


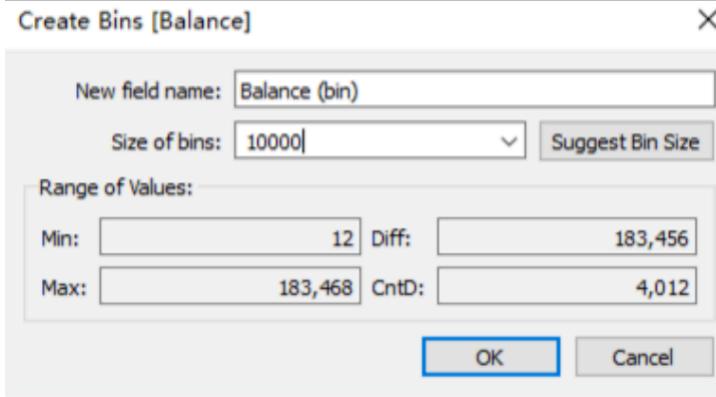
Now we want to change color, since green meaning money, so we still use blue. Just drag **SUM(Number of Records)** to the **Color**. Done!



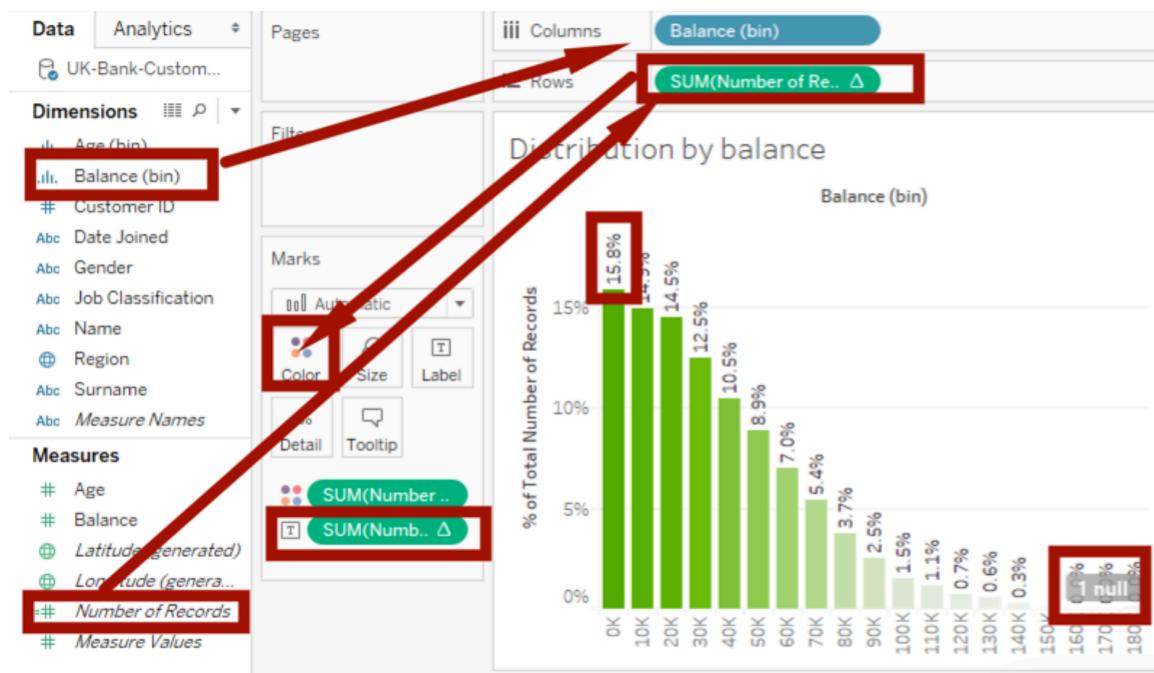
Now we need the leveraging the power of parameters(get the distribution by balance)

First, we create Balance Bins by right clicking the **Balance->Create->Bins**, and change Size of bins to **10000**.

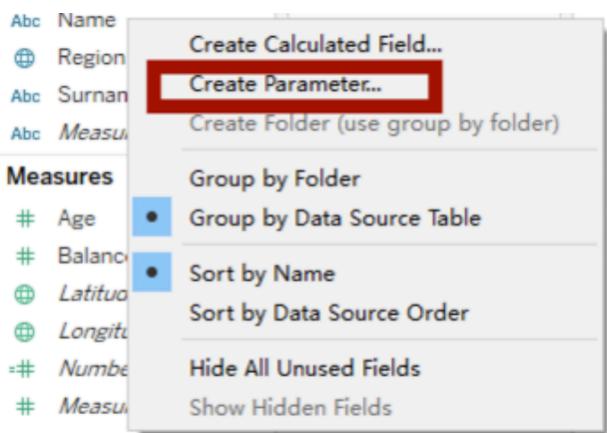




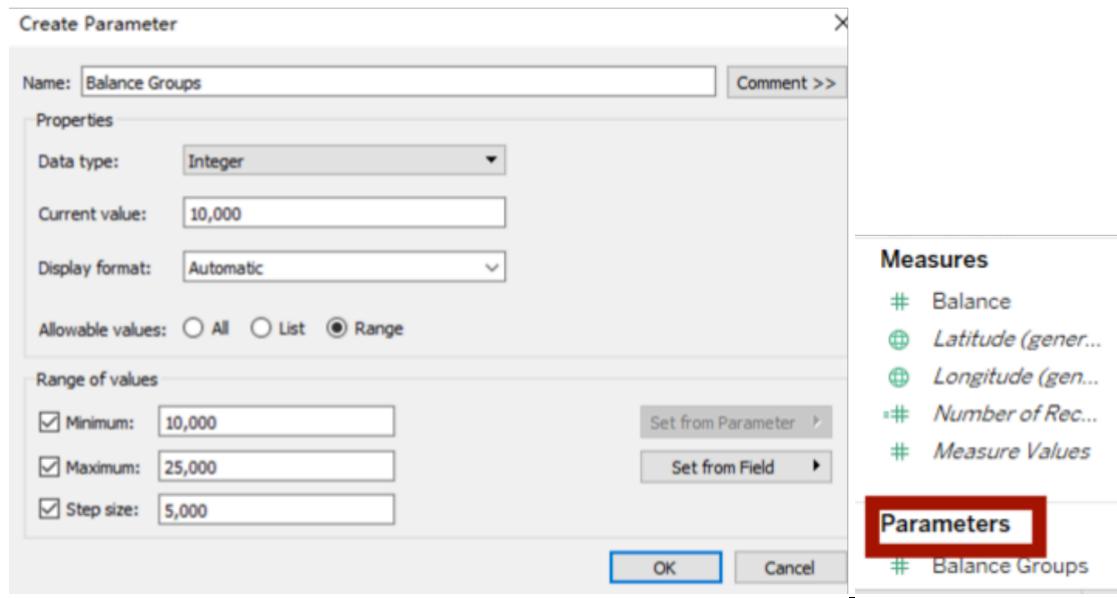
Now, like the previous bar graph, we can have the similar leverage graph. We can change to Percentage, change color and number format. However, we notice at the right down corner, there is a null because the number range is missing. We can delete this, but recommended to keep it. Right clicking the “1 null” we can hide this tag.



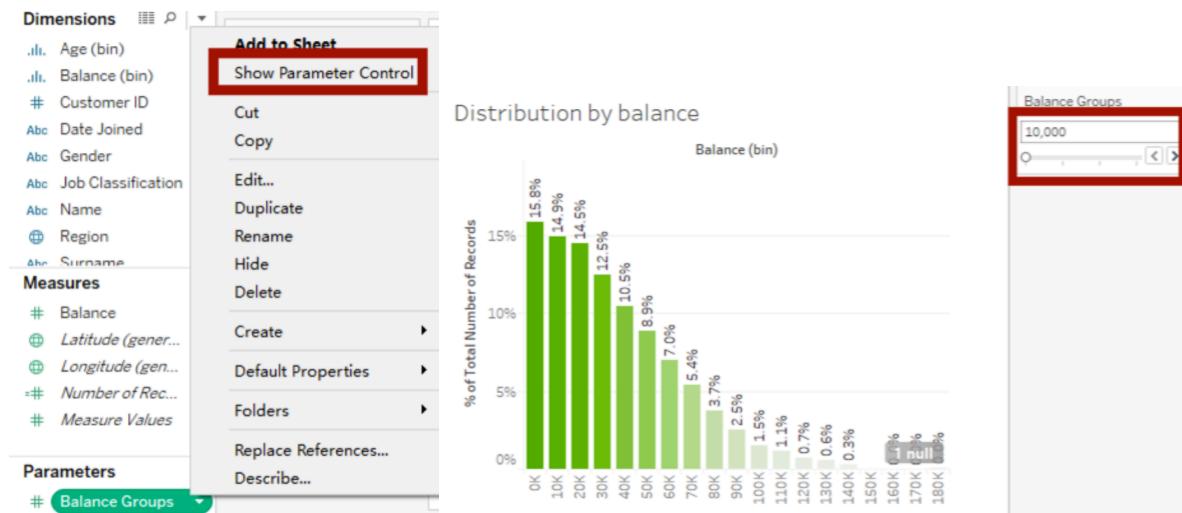
But we have better way to show this graph dynamically by changing bins. Right click the blank area on **Measures panel** to choose **Create Parameters**.



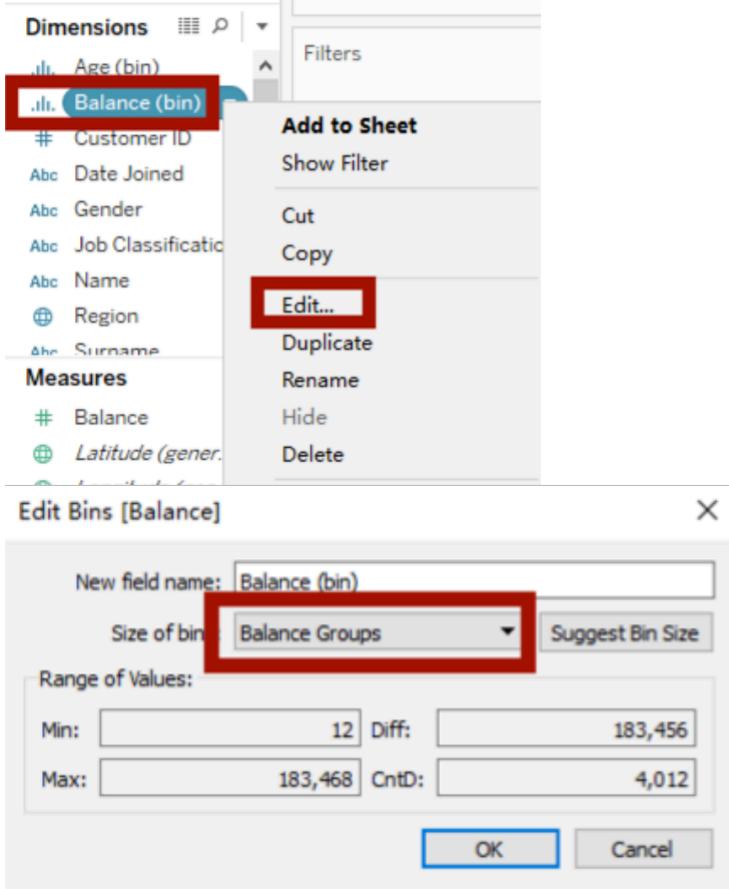
Give a name called **Balance Groups** (This will be the slide bar name), Date type: **Integer**, Current value: **10000**, Range-> Minimum:**10000**, Maximum:**25000**, Step Size:\$**5000**. Click **OK**. Now a small Parameters will show up.



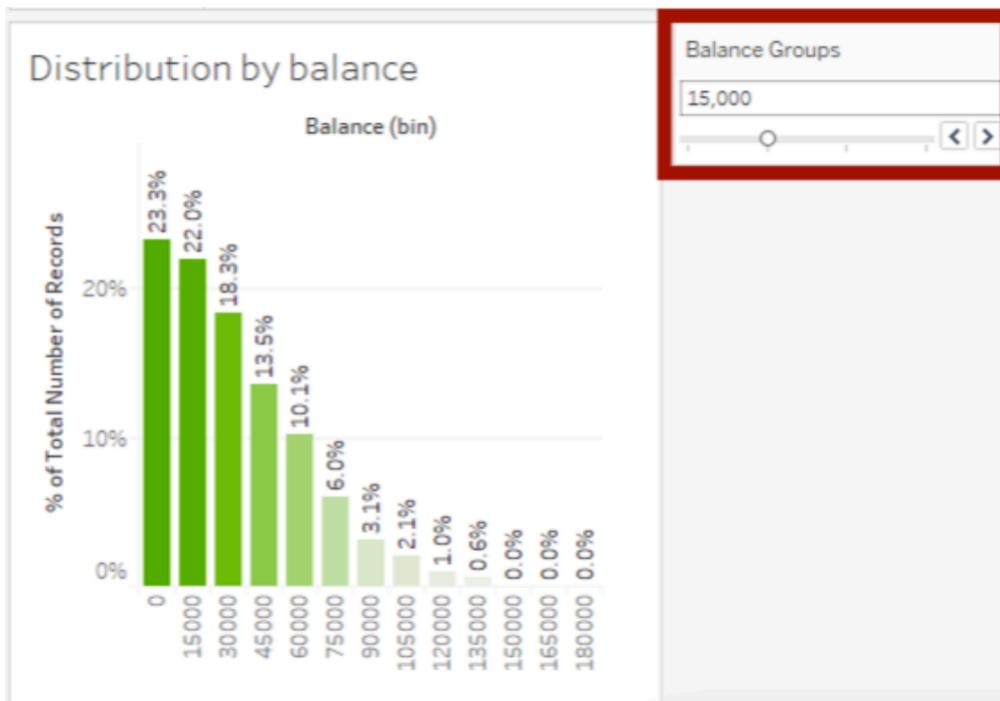
Right click **Balance Groups**, choose **Show Parameter Control**, then we can see the slide bar on the right top.



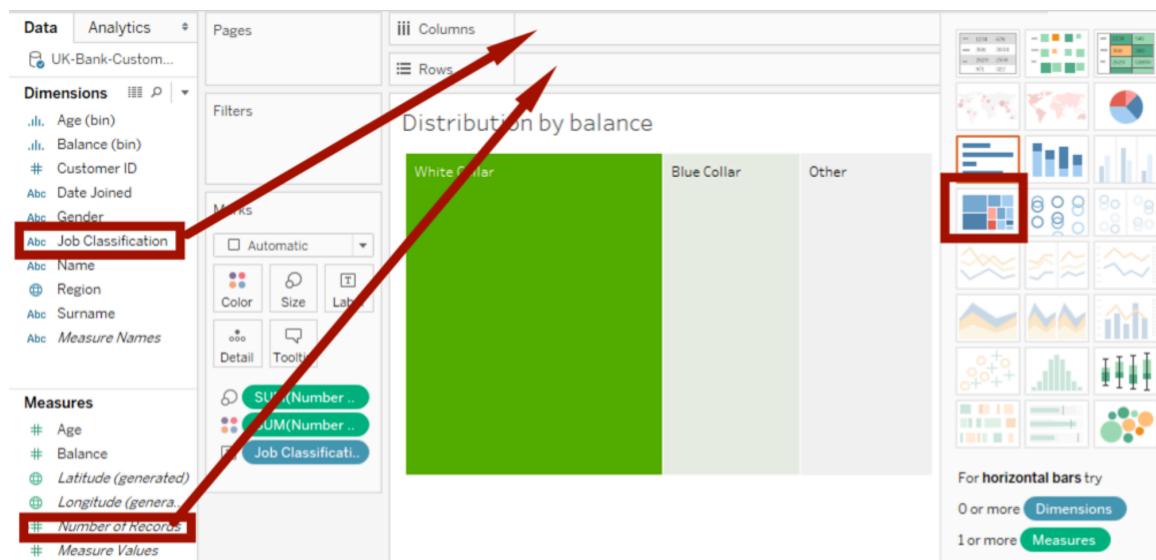
But the graph is not moving when sliding the bar, so we need to build the connection. Right click the **Balance (bin)** -> **Edit**, choose **Size of bin** to **Balance Groups**.



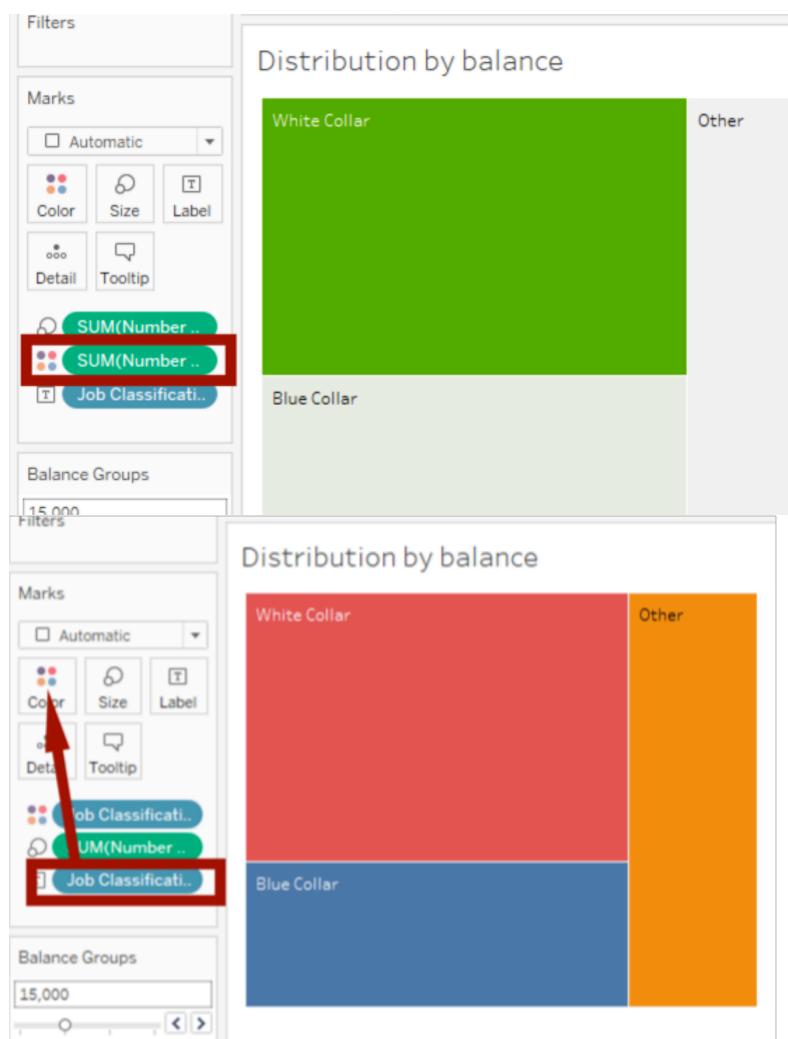
Now when slide the bar, we can see the graph changing by the Balance Groups.



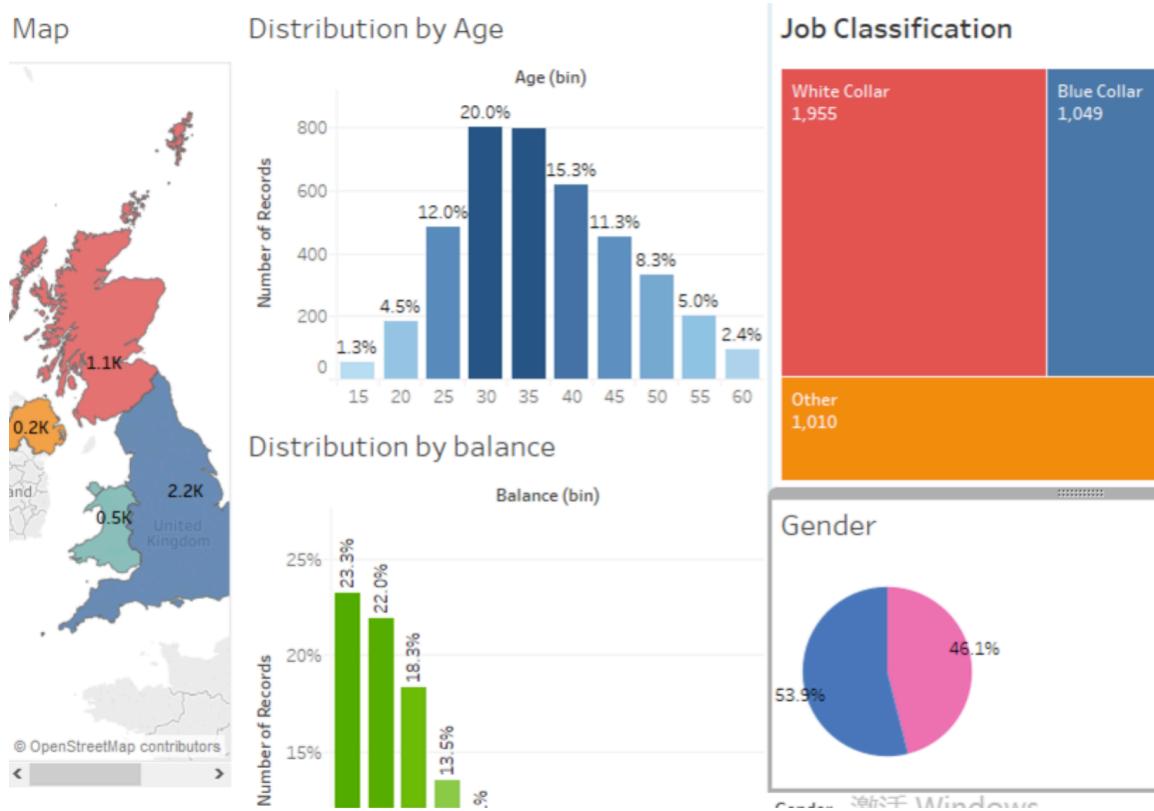
Create TreeMap chart. Just drag **Job Classification** to **Columns**, **#Number of Records** to **Rows**, and choose TreeMap chart. Actually we can just adjust the graph's size to make it look packed.



And we need to get rid of default **SUM(Number of Records)** color and drag **Job Classification** to the **Color**.



Now we want to put all graphs into one screen, just new a dashboard and drag all graphs here.



If you accidentally delete the parameter-dashboard like **Balance Groups**, just right click the tiny triangle on the right corner on the frame, choose **Parameters->Balance Groups**, and it will come back.

