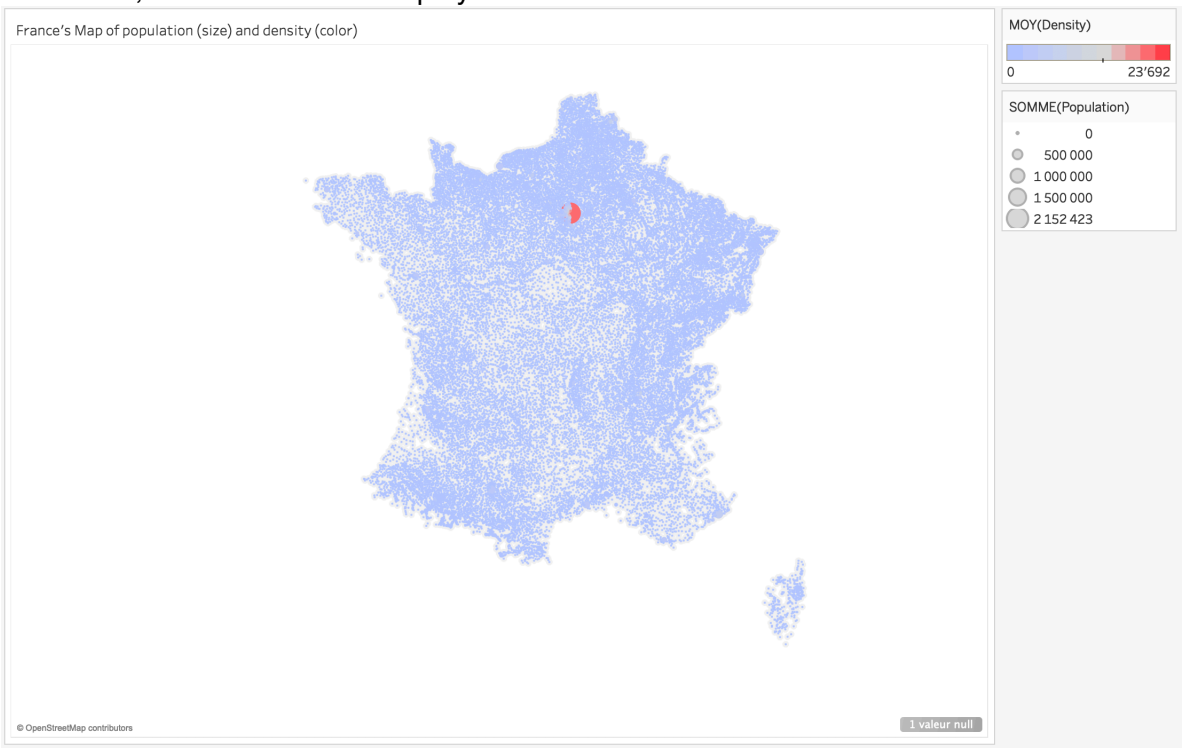
Lab 1 : Introduction to Tableau

Part I : Main assignment and Exercises

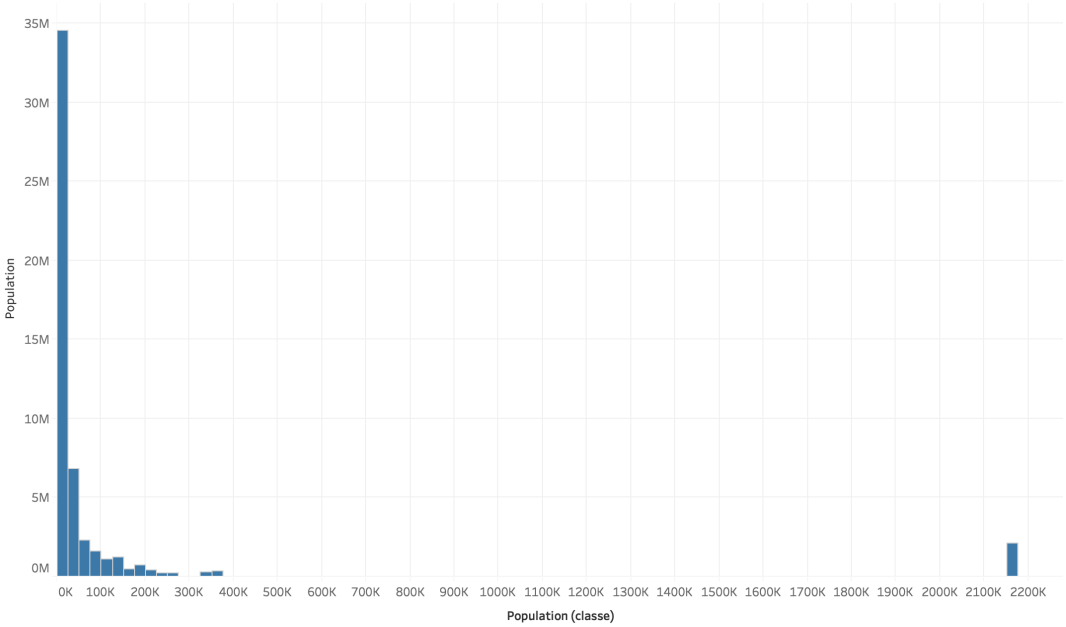
The first part of the main assignment is to plot a map of France, while mapping the following data attributes :

- Population to the size
- Density to color

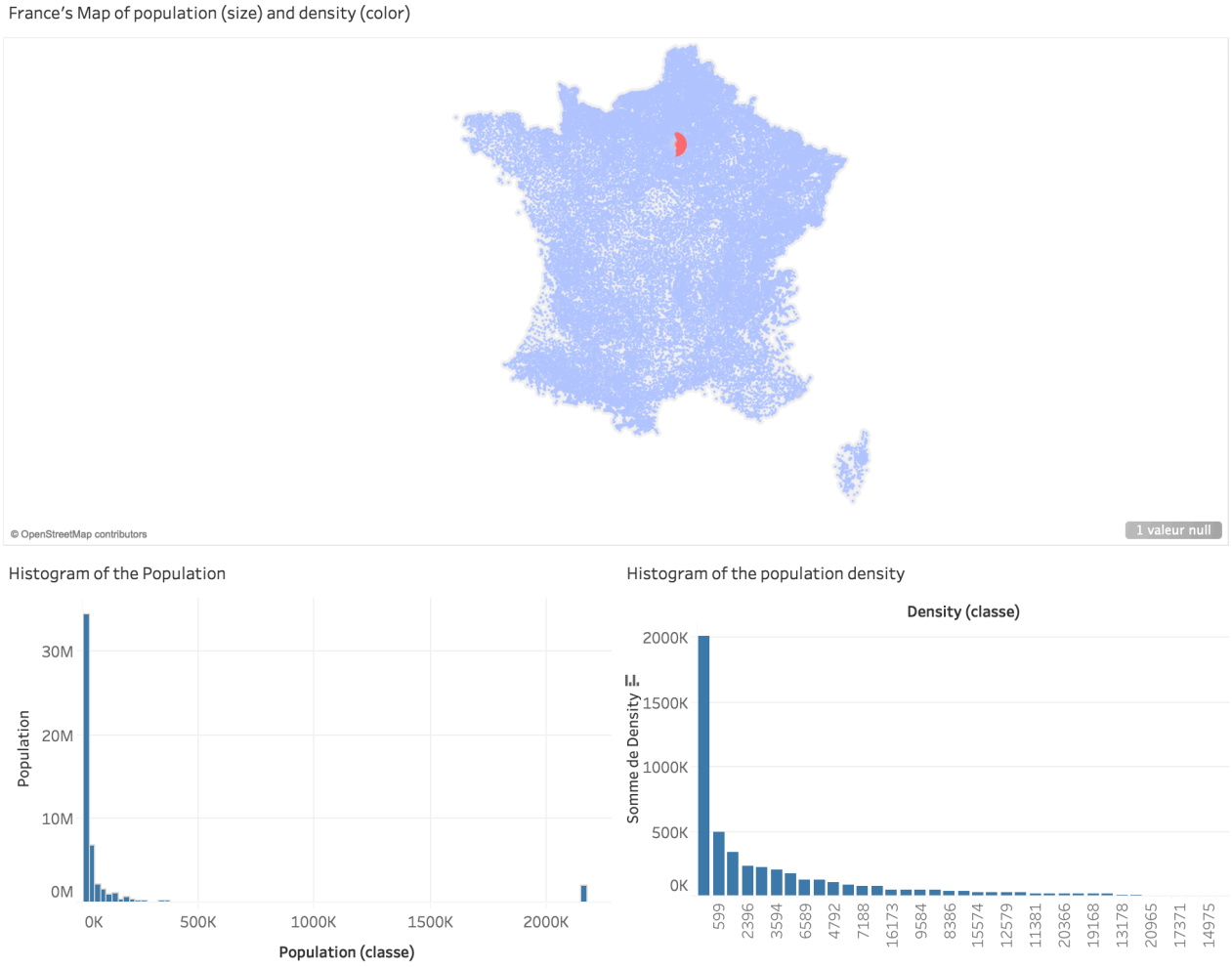
In Tableau, the result can be displayed :



We can then plot a histogram of the population. After having tried several class sizes (bins), a class size of 25'000 allows a straight forward interpretation.



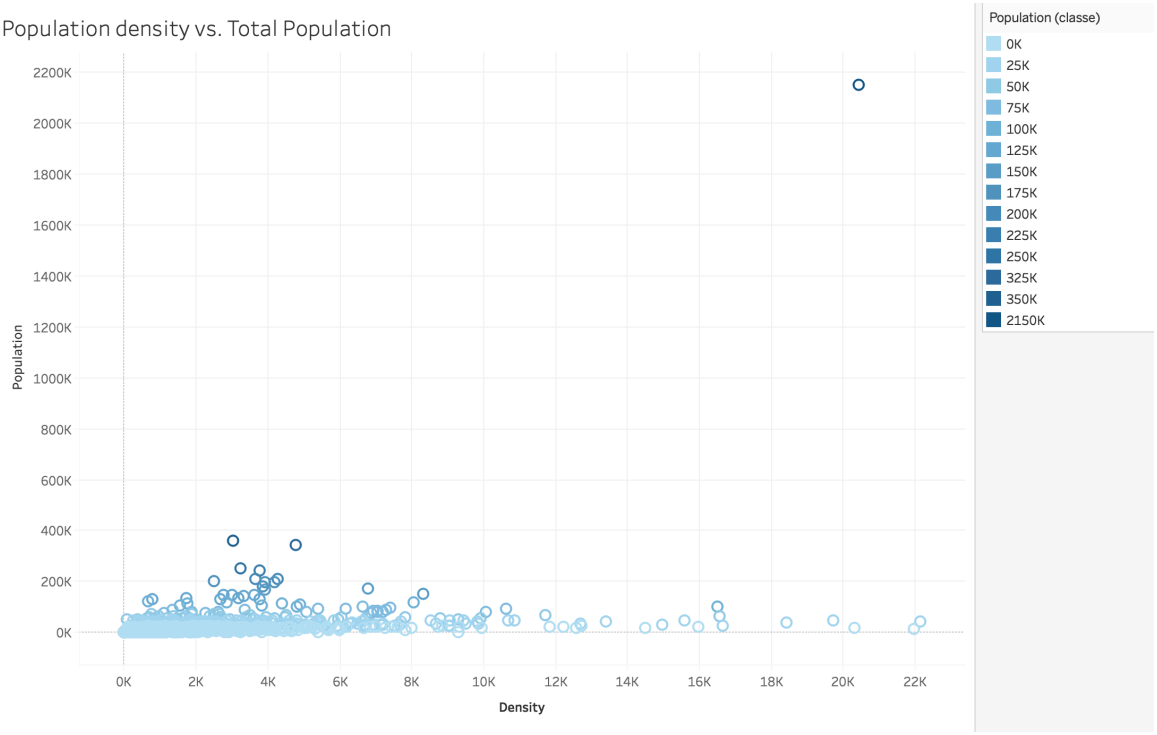
Then, we can create a dashboard that displays the map and the histogram of the population. I have also included the histogram of the population's density.



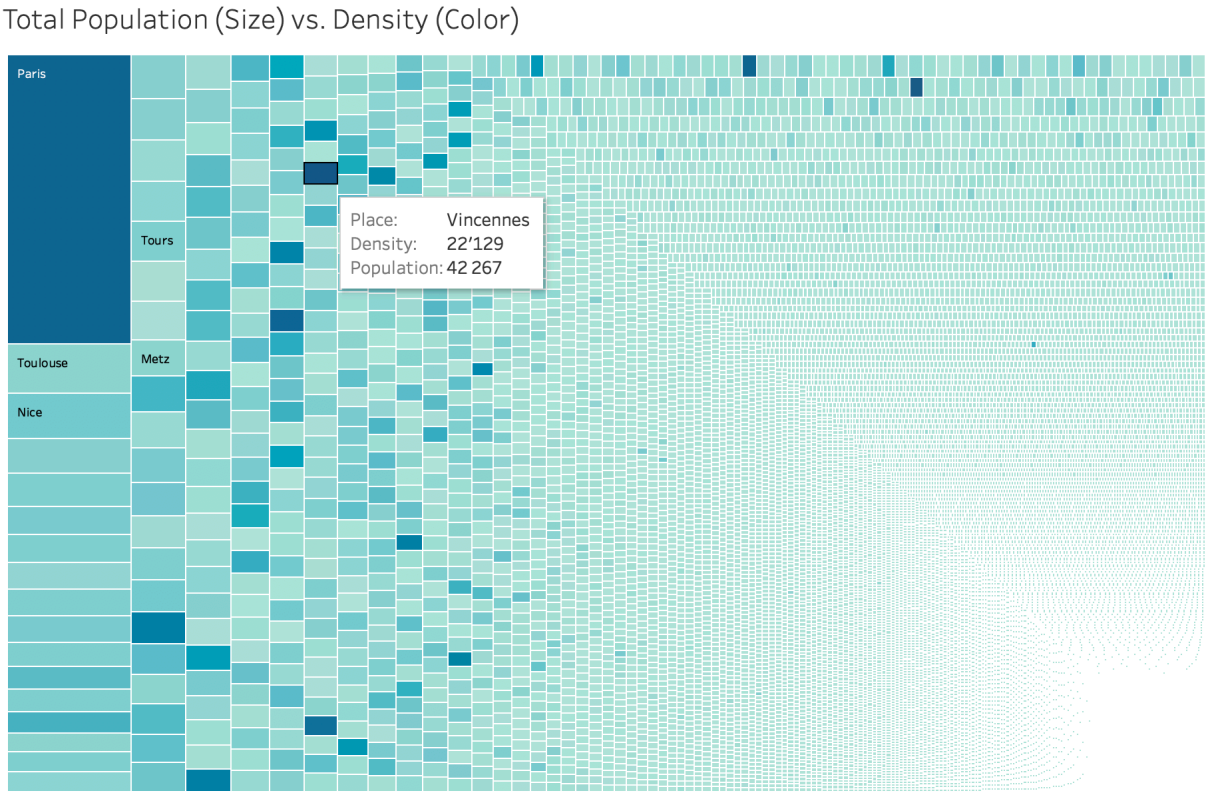
The class encoding have been chosen to reflect the diversity among the French cities.

Part II : Further exploration

I have chosen to further explore the dataset by plotting the population's density of a city against its overall population. We notice a large outlier in terms of population, which is Paris, but also high leverage points with some cities that have an extremely high density, such as Vincennes.



This can be further illustrated by representing this information as a Treemap. Treemaps allow to identify the ranking of a city in terms of population according to the size of the boxes, and the density of the population according to the color.



Finally, I have plotted the density of population along latitude and the longitude, to see if we would identify some patterns for the location of the cities that have the highest density. There seems to be a large variance for the density of the cities close to Paris, and overall some other clustering effects regarding large cities.