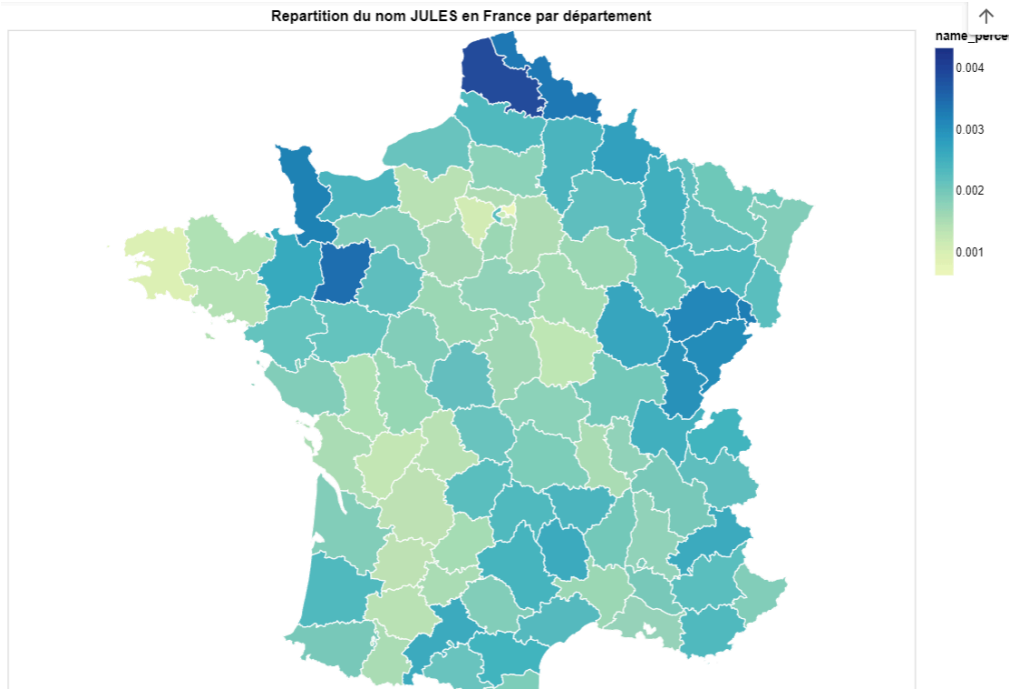
In this second visualization, we focus on the spatial differentiation of the names. To be able to distinguish the name usage between regions we have opted for a classical geometrical design, but in each region we represent the **name density**, namely the name usage divided by the total number of names in the region.

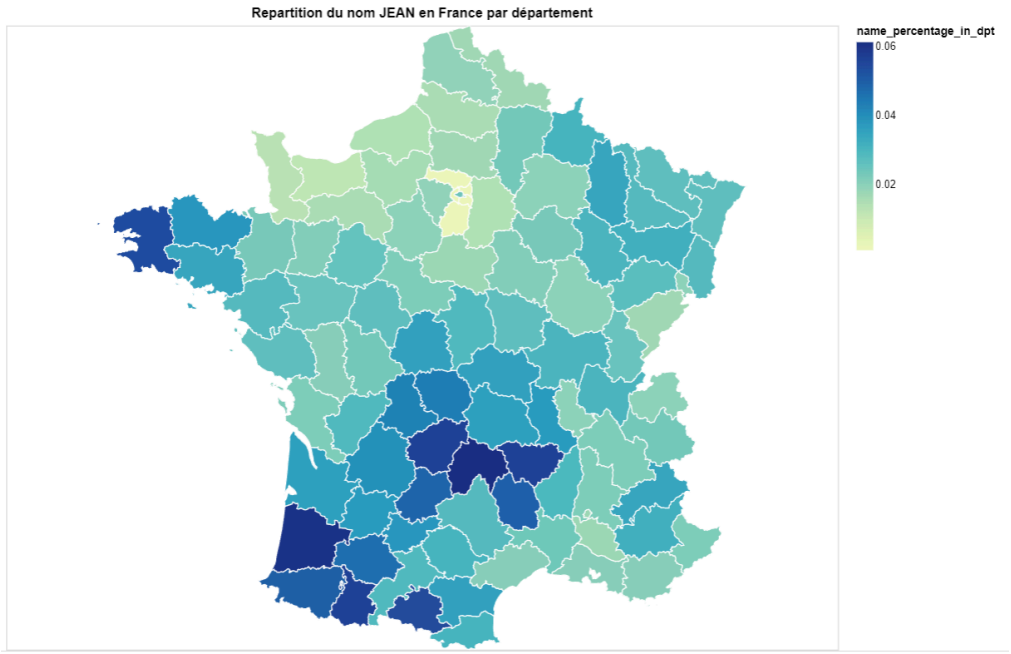
This allows us to compare regions without having to know their population size, etc.

We have added a feature to be able to choose a custom name:

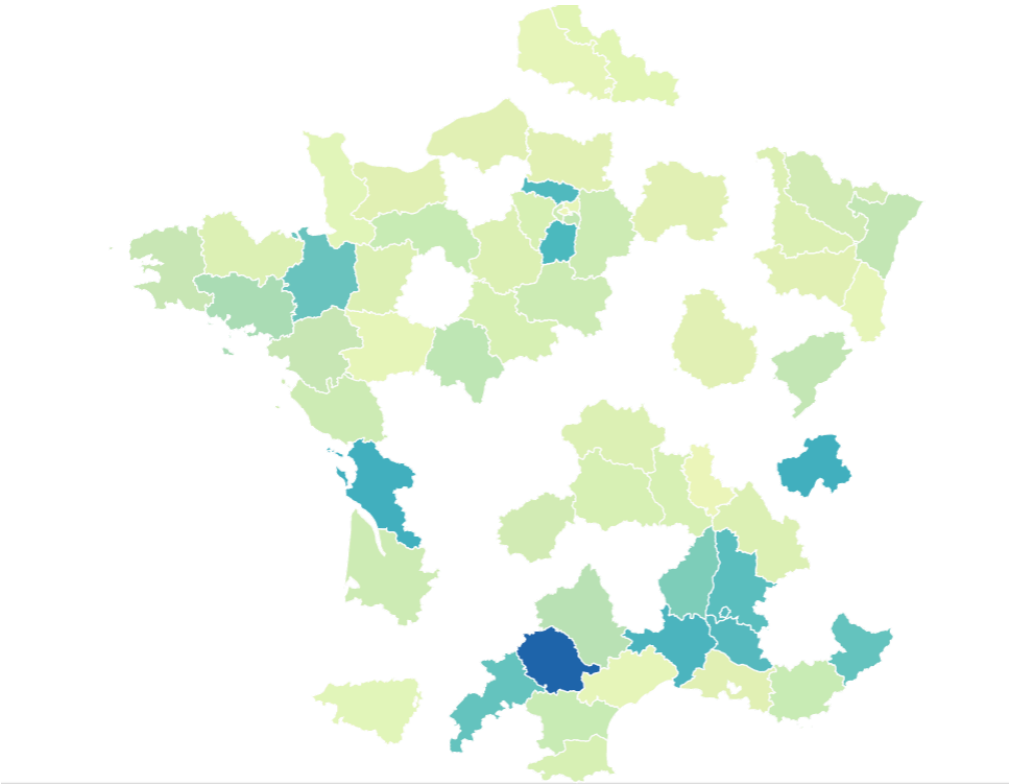


We have then added an option to choose names according to their popularity.

Here is the result for the most popular name:

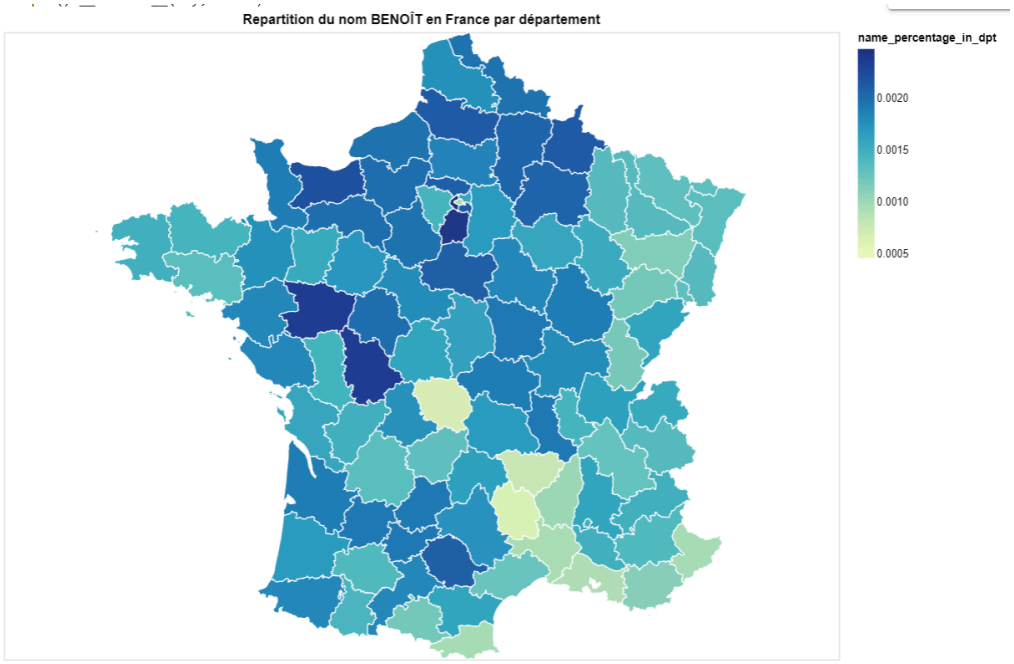


We can also choose the least popular ones :



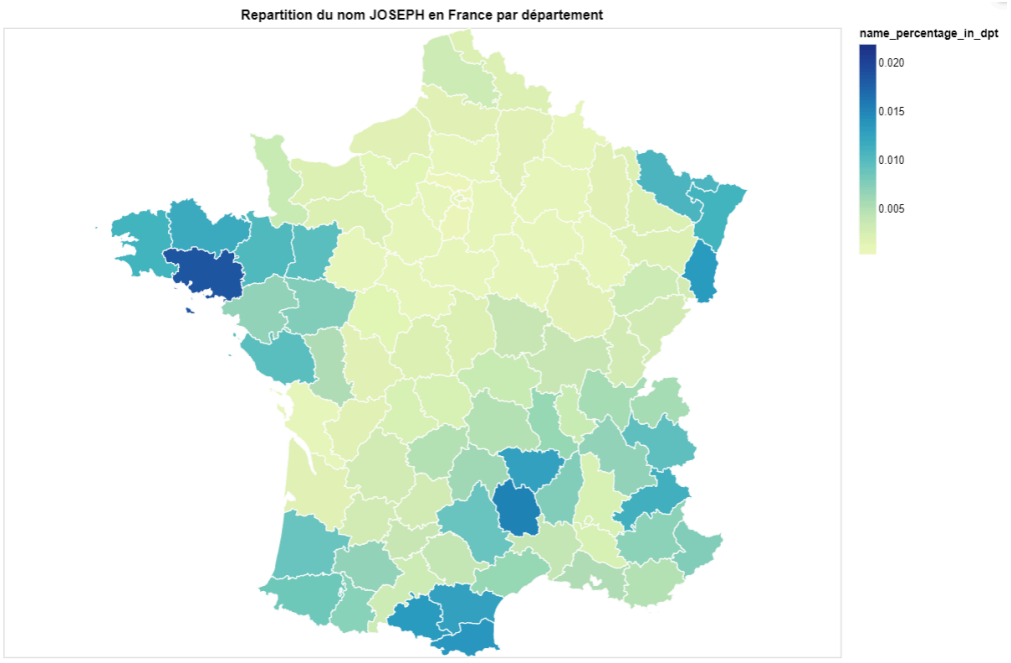
this is for the name “LOANNE”

To have more randomized results we then created a function that shows his name randomly but the random factor is multiplied by the popularity of the name, making it more probable to select a very popular name.



We also wanted to answer the question if some names were more used in certain regions than others, which is why we introduced the variance feature.

The results are impressive, the name usage can vary from 1 to 100 for the most extreme names.



To be able to compute the features correctly, we had to apply a pressure train on the departments and the names to exclude the outliers.