

By fixing  $k$  and modifying  $N$  we can see that for small values of  $N$ , the distribution is not homogeneous. In other words, there are intervals in which there are many more elements than in others. However, if we choose a high number for  $N$  we can observe that the columns are all quite similar.

Conversely, if we fix  $N$  and change  $k$  we can notice that for small values of  $k$  the columns are relatively similar. Nevertheless, as  $k$  increases, the differences between the columns start to grow, resulting in some columns being much higher than others.

In conclusion, when  $N$  is significantly larger than  $k$  the columns tend to be more equal. However, if  $N$  is not much higher than  $k$  the differences between the columns become much more evident.