

Battle of the Neighborhoods

- blogpost -

Balancing the arts offer in Paris

The local public authorities in Paris, France, have provided an interesting opportunity to apply data science methods to improving the quality of life in the city.

Ensuring relatively uniform availability of various services across the city is one of the constant challenges for city authorities around the world. That includes basic services, such as education and healthcare, but also other services that contribute to making living in the city comfortable and fulfilling. The latter group includes arts, which is not just for entertainment but also plays an important educational role.

In Paris, the city authorities were planning to provide financial support for the opening of new arts venues. To improve the availability and diversity of the arts offer across the city, they needed to ensure that the new investment would target in particular categories of arts venues that were not already the most common types of arts venue in a given neighborhood.

The challenge was to identify the most common categories of arts venue in each neighborhood in Paris. That was done by combining data from the open data portal maintained by the Paris Mayor's Office and from Foursquare. By combining the two categories of data, it was possible to create a comprehensive dataframe that included the names and the coordinates for each neighborhood, as well as the top 5 most common arts venues in each of them.

To prepare their investment plan, the Paris city authorities needed to have a broad overview of categories of neighborhoods, so they could prepare a few lists of priorities for the different groups of neighborhoods, not a large number of such lists covering each neighborhood separately. For that purpose, the neighborhoods were clustered using k-means.

The clustering of the neighborhoods immediately showed that art galleries and theaters would be a good investment only in certain clusters, because they were already the dominant categories in the other ones. The analysis also showed that museums should be added to art galleries and theaters as low priority in one of the clusters.

By providing the general picture of the neighborhood of Paris grouped by the most common types of arts venue, the analysis has enabled the city authorities in Paris to tailor their investment plans to the differences between the different neighborhoods. Instead of a blind plan that risked resulting in a more unbalanced availability of the arts offer across the city, they were able to have a targeted program that would foster more diversity and balanced distribution, which is one of the factors that can increase the quality of life in a major city like Paris.