**Introdução a ferramentas para análise de dados e visualização da informação**

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**3rd Practice**

Link for the website with all the exercises: https://a51169.github.io/3rd\_practice\_site/index.html

**Work summary:**

**1st Tab – Carto 1**

I reproduced the same analysis that we have done during the class with the same dataset (“costumers.csv”). However, I made a few changes to explore different formats for presenting the data.

> Layer 1 (spending)

[Styling]

* Point size by value (var *spend*), 7 categories, equal intervals
* Point color by value (var *spend*), 5 categories, equal intervals

> Layer 2(cluster\_spending)

[Analysis]

* Calculate Cluster of Points (5 clusters)
* Create Polygons from Points (method Convex Hull, grouped by var *cluster\_no* and measured by the var *spend* average)
* Add a legend with grading colors from minimum to maximum

If the site doesn’t work, you can access the map with this link: <https://mappingspain.carto.com/u/jsotero/builder/d219103c-fd60-469a-8c15-9a8012f07d19/embed>

**2nd Tab – Carto 2**

In this exercise I used two data sets (subway NY and NY Airbnbs). I didn’t explore the full potential of these two data sets. However, in the future, I will dedicate more time to understand more about this particular analysis.

> Base map with Mapbox

* I changed the road color to pink and made a few adjustments in other colors and fonts.

> Layer 1 (NY\_subway)

This layer only shows the subway map.

>Layer 2 (Airbnb party)

It shows all the Airbnbs in NY area.

> Layer 3 (filter)

[Filtering]

* I applied a filter to show only the Airbnbs which prices are greater than or equal to 500€/night

[Analysis]

* Calculate Cluster of Points (5 cluster)
* Bounding Box (method Convex Hull, grouped by var *cluster\_no* and measured by the var *price* average)

[Styling]

* I used CartoCSS to change the line color.

[Hoover]

* I added a tooltip (Hover) to show the cluster category and the average price for each point

[Legend]

* Both analyses are presented with legend

[Widgets]

* The widget allows the user to search for a specific neighborhood

Layer 4 (Hexbins)

* This layer shows a hexbin by the var *price* (average)

In case the site doesn’t work you can access the map with this link: https://mappingspain.carto.com/u/jsotero/builder/b9497353-4649-442c-9b0d-8a5441159247/embed

**3rd Tab – Kepler**

I used the NY Airbnb data set (same as before). I explored Kepler’s 3D functionality for this Hexbin.

Base map with MapBox (same as before)

Layer 1 (Airbnbs)

It shows all the Airbnbs in NY area.

[Filtering]

* I applied a filter to show only the Airbnbs which prices are greater than or equal to 250€/night

Layer 2 (heatmap) - Extra

I created a Heatmap to confirm the results.

Layer 3 (Hexbin)

This layer shows a 3D hexbin with the same criteria as before.

Tooltip

* Hoover with var *name\_airbnb* and var\_*price.*

Link: <https://kepler.gl/demo/map/carto?mapId=24e75bab-6c53-d9a5-fa65-74922676601f&owner=jsotero&privateMap=false>

**4th Tab – Mapbox**

In this tab I embedded the base map created with Mapbox (the same that was used in the last two exercises).

Link: <https://api.mapbox.com/styles/v1/josemsotero/cl463ojvt003u14mo7hm6scii.html?title=view&access_token=pk.eyJ1Ijoiam9zZW1zb3Rlcm8iLCJhIjoiY2wzajNreHlyMDJ3dTNqcDhvbHo0MjN2YyJ9.QWIUY5pEWyQa4LbgxL8c5A&zoomwheel=true&fresh=true#11.27/40.6865/-73.9721>

**5th Tab – D3**

In this exercise with D3, I used the Lisbon Airbnb data set to show the most expensive airbnbs in the region (>9.000€/per night).

First, I loaded the data and then I added some animation to identify the 3 most expensive airbnbs in Lisbon.

The visualization was created with *Observable* and then embed in the site.

Observable link: <https://observablehq.com/@2008ecd4bdb60036/portugal-basemap>

(I made a few changes offline with Visual Studio Code. Some styling aspects are different in the site).