Gabriele's Coursera Capstone Project

A restaurant in Rome

Gabriele Biagioni

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Introduction/Business Problem

Imagine that you want to open a restaurant in the city of Rome; what is the best place to open it? There are many considerations to do in order to take a decision like this: the number of possible customers, what is the number of restaurants in a particular location and so on…
Tourism and restaurant entrepeneurs should be interested by this project, in particular because this analysis is important in order to have the best profit.
We use Foursquare data to see a lot of characteristics about restaurants venue, number of customers and so on. After that we analyse the data obtained in order to choose the best location for a new restaurant in Rome.
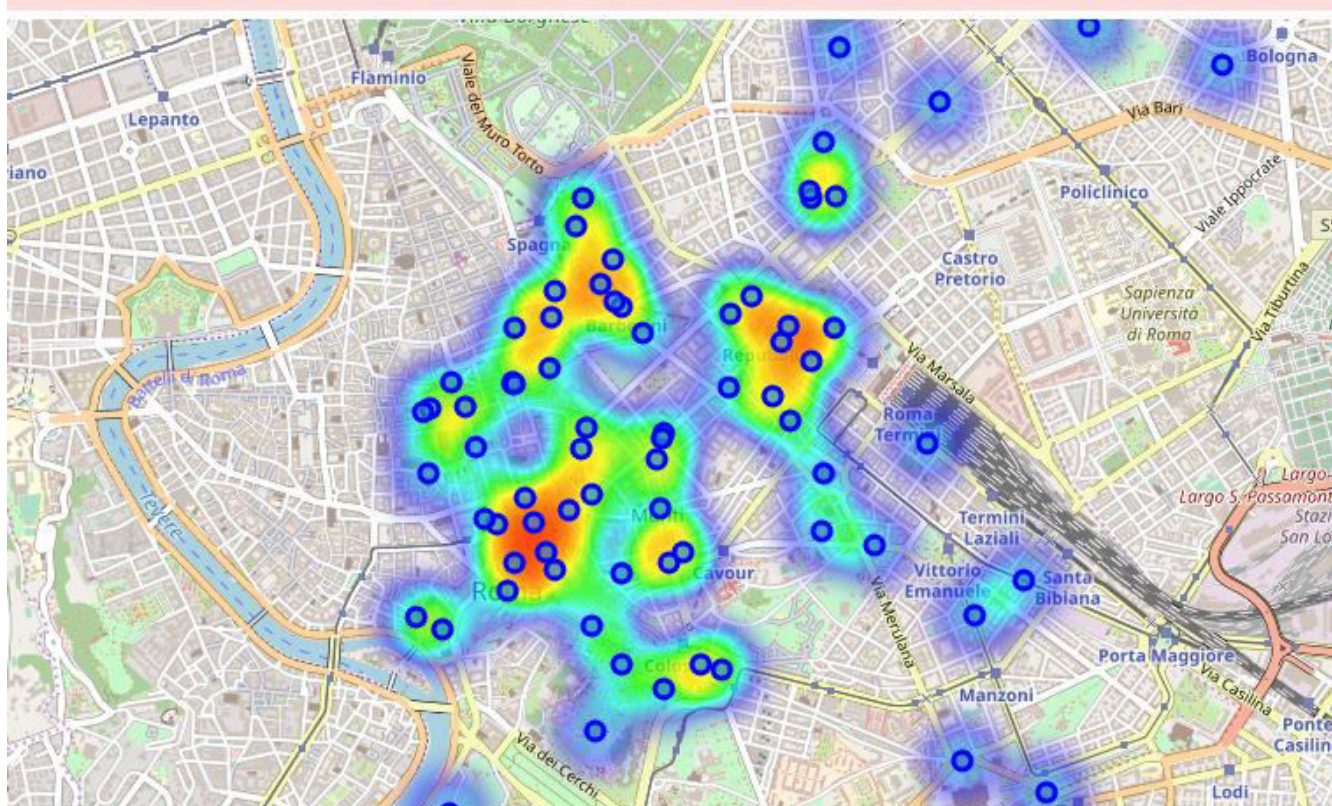
Data

The data I will use is from Foursquare; the useful information are unique id, name, address, latitude and longitude of each restaurant. Then, using kernel density estimation technique, we want to see the area of influence of the existing restaurants in order to open the new one in a place that is not influenced by the others.
Here we can see an example of the data obtained in a dataframe:

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	Restaurant_ID	Restaurant_name	Restaurant_shortname	Restaurant_address	Restaurant_postalcode	Latitude	Longitude
0	4adcdac2f964a52003521e3	Palazzo del Freddo di Giovanni Fassi	Ice Cream	[Via Principe Eugenio 65, 00185 Roma Lazio, It...	00185	41.893714	12.508152
1	56b0b1b2498e0bf62374cb86	RADICI - Pizzicheria Salentina	Deli / Bodega	[Via Emanuele Filiberto, 38-40 (Via Cairoli), ...	00185	41.892456	12.505773
2	4ca74622b0b8236a6054a7e6	Piazza di Porta San Giovanni	Plaza	[Piazza di Porta San Giovanni, 00183 Roma Lazi...	00183	41.885977	12.509265
3	4dcf87dbfa7664b7c6c407f5	Piazza San Giovanni in Laterano	Plaza	[Piazza San Giovanni in Laterano, 00184 Roma L...	00184	41.887150	12.505158
4	57f4aed7498e27eb6826f2b6	Mercato Centrale Roma	Market	[Via Giovanni Giolitti, 36, 00185 Roma Lazio, ...	00185	41.898705	12.503486

Methodology

In this analysis I used the principle used to construct Heat Maps using Folium, that is Kernel Density Estimation. Doing this I have obtained this map:

We can see that there are 4 places where it is advisable to open a restaurant in Rome, and they are highlighted in the map we have created.

Results

The result is that the best place to open a restaurant in Rome, after this analysis, is the region between Piazza Venezia and Via del Corso, highlighted in red.

Discussion

Obviously there are other evaluations to do in order to open a restaurant but, based on the concentration of restaurants in the area, the best place I have found is a good one, also for the presence of many tourists.

Conclusion

This is my attempt to find the best place to open a restaurant in Rome, I hope you can find it interesting.