Opening a Sushi Bar

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Introduction

Background

In recent years there has been the multiplication of a new type of fast food restaurants based on fish: the sushi bar. Conquered by the wholesomeness of the ingredients and their freshness, by the delicate flavors and by the thousand variables of tastes and combinations, the Italians, and not only, have been conquered by Japanese cuisine and especially by sushi. Hence the proliferation of places specializing in sushi such as sushi kiosks, sushi bars and gourmet restaurants of Japanese cuisine, which, from a simple trend, have now become an integral part of Italian food.

Opening a sushi restaurant, given its great success, is still possible with excellent results despite the high competition and, precisely because of this, it is essential to study a format and a proposal that combines the tradition of Japanese cuisine with innovation . An interesting idea is certainly to open a sushi bar, or a more informal place where customers, seated at tables or at a counter, can enjoy fresh sushi prepared in front of their eyes by a competent sushi man.

How to be successful

Even if the target audience is expanding, it is good to remember that the main clientele of a sushi bar, at least in Italy, is mainly composed of young people between 20 and 40 years old. On the basis of this main target, pricing, promotion and communication strategies will therefore have to be calibrated, as well as the design and preparation of spaces and environments.

An accurate choice of location will be essential to open a successful sushi bar. A small to medium-sized commercial space (50 to 70 m2 based on the number of seats will suffice) located in large cities (catchment area of about 30,000 inhabitants or more) where there is a target consisting mainly

of young people, tourists, students and young workers who love news and fun will be the ideal place for the opening of a successful sushi bar.

To open a small sushi bar you will need a minimum investment of approximately 50,000 euros.

My goal

An old aunt left a nice nest egg to the undersigned: 1 million euros. I can finally realize my dream: to open a trendy restaurant in one of the most beautiful Italian cities.

I have always worked in the world of catering and I am doing well in the kitchen. To follow my dreams I went to Japan and spent 5 wonderful years learning the secrets of Sushi.

Also I love being among young people. So my dream is to open a Sushi Bar in a university city where there are many young people. The choice falls on Bologna, a city full of young people with a historical university.

The opening price may be lower than in other cities. There would be competition in any case because Bologna is full of clubs. There are not as many foreign tourists as in Rome or Milan, so opening in Bologna would have this penalty. But the city is sensitive to news and this is a plus. Since I am convinced of my skills and the fact that my Sushi bar can offer something better than the competition, I will try to rent the place where there is a greater concentration of restaurants and

possibly Sushi Bars. Obviously I will try to stay as close as possible to the center, compatibly with the cost of the rent. I will try to identify areas with the biggest concentration of young people.

Interest

This study will help anyone who wants to start a restaurant business in a young and dynamic city like Bologna The business plan that will be illustrated has a general value: anyone who wants to open a restaurant somewhere will find the illustrated methodology and the examples provided useful. The considerations made can be applied to any city and to any type of restaurant / pub / caffee shop etc etc.

Data

The following data sources will be needed to extract/generate the required information:

- A Pandas dataframe will be provided with some data about the main Bologna's neighborhoods (name, area, density of inhabitants, sub-districts)

- The dataframe will be enriched by the cohordinates (latitude and longitudes) of candidate areas that will be generated algorithmically and approximate addresses of centers of those areas will be obtained using Google Maps API reverse geocoding.

- Number of restaurants and their type and location in every neighborhood will be obtained using Foursquare API.

- The list of Sushi Bars in the Bologna neighborhoods and their location with respect to the center of the selected neighborhood will be retrieved using Foursquare API.

- For each Sushi Bar I will analyze the number of clicks received and the comments. From these data I will be able to understand the age of the clientele in relation the position of the restaurant itself.

Data acquisition and cleaning

The information of the Bologna districts was read from the wikipedia page available at

https://it.wikipedia.org/wiki/Quartieri_di_Bologna.

The data read was rather 'dirty' and therefore it was necessary to perform a 'cleaning' of the dataframe. In the end the result was illustrated in the following table.

	neighborhood	area	inhabitants	density	sub district
0	Borgo Panigale-Reno	31.436	61141.0	1944.935742	Borgo Panigale, Casteldebole, La Birra, Barca,...
1	San Donato-San Vitale	26.268	66297.0	2523.869347	San Donato, San Vitale, San Donnino, Pilastro,...
2	Navile	25.875	69187.0	2673.893720	Lame, Corticella, Bolognina
3	Porto-Saragozza	15.766	69477.0	4406.761385	Andrea Costa-Saragozza, Malpighi, Marconi, Saf...
4	Santo Stefano	30.040	64258.0	2139.081225	Galvani, Irnerio, Murri, Colli, Roncrio, Barbi...
5	Savena	11.469	59810.0	5214.927195	Mazzini, San Ruffillo, Fossolo, Pontevecchio, ...

The population density is shown in the following picture.

The neighborhoods with the maximum and minimum population density were highlighted. The highest one is Savena.The lowest one is Borgo Panigale.
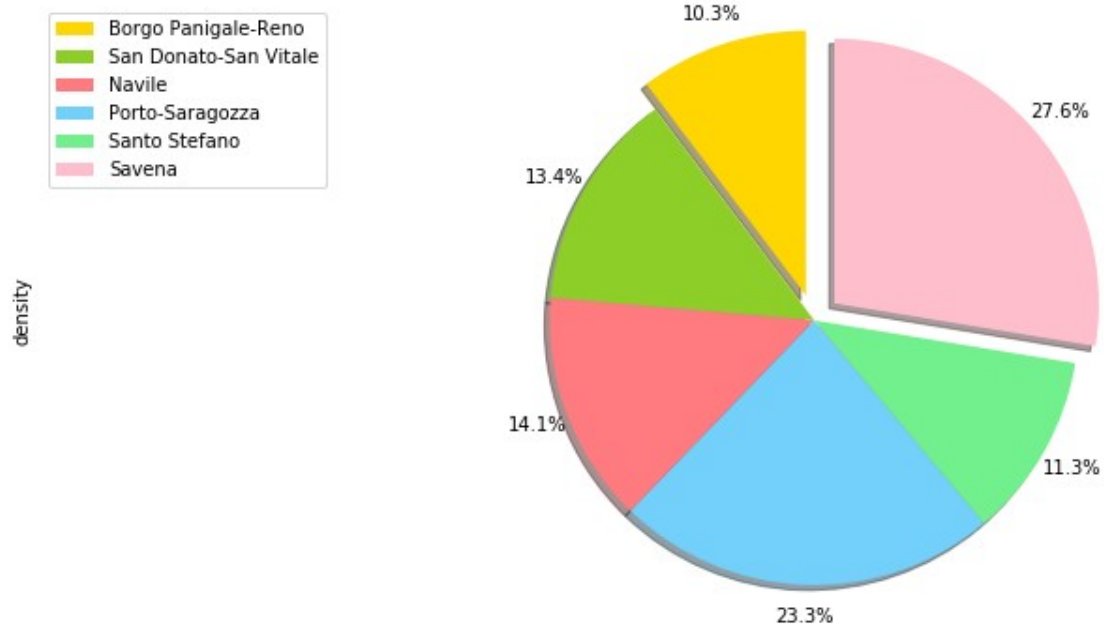

The geographical coordinate of Bologna are 44.4936714, 11.3430347. Here below the Bologna's map obtained by Folium. Some popup showing the population density have been added to the map.
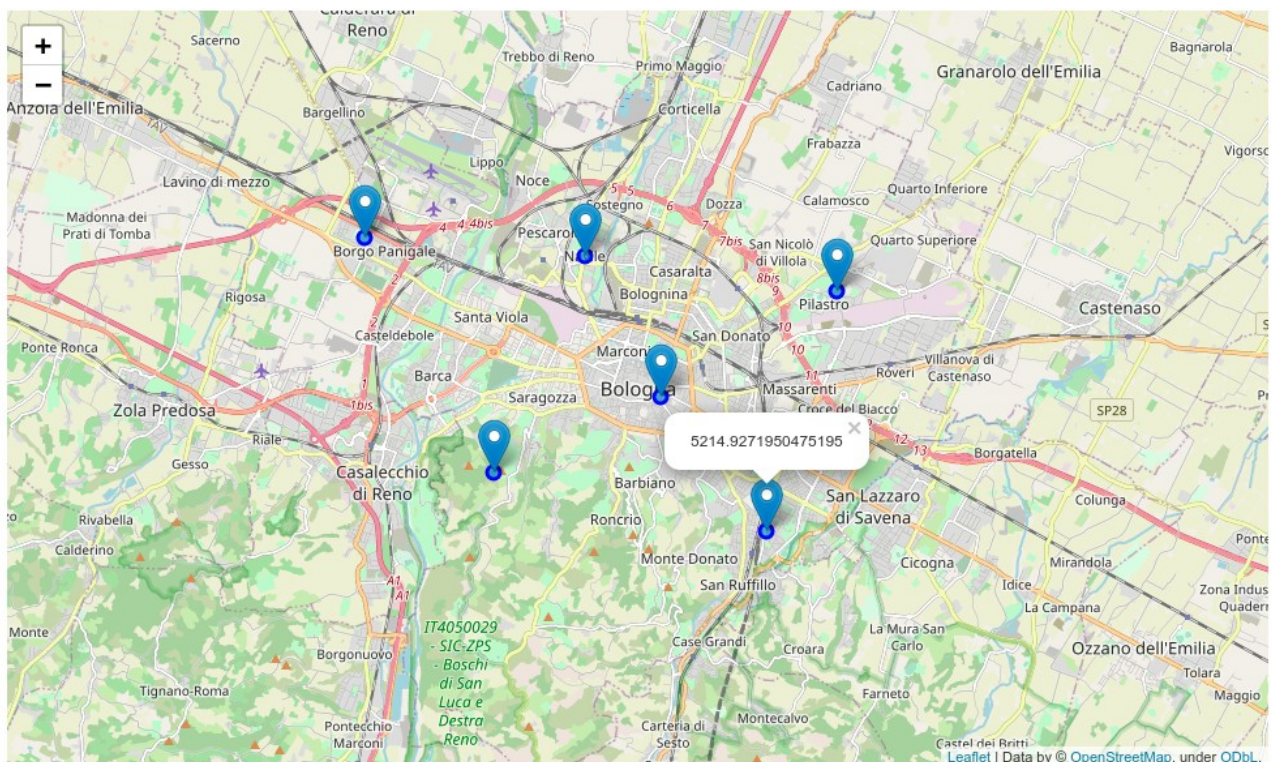
Now we want to create a `Choropleth` map of Bologna. We will use the *choropleth* method with the following main parameters:

1. geo_data, which is the GeoJSON file.

2. data, which is the dataframe containing the data.

3. columns, which represents the columns in the dataframe that will be used to create the `Choropleth` map.

4. key_on, which is the key or variable in the GeoJSON file that contains the name of the variable of interest. To determine that, you will need to open the GeoJSON file using any text editor and note the name of the key or variable that contains the name of the neighborhoods, since the neighborhoods are our variable of interest. In this case, **name** is the key in the GeoJSON file that contains the name of the neighborhoods. Note that this key is case_sensitive, so you need to pass exactly as it exists in the GeoJSON file.
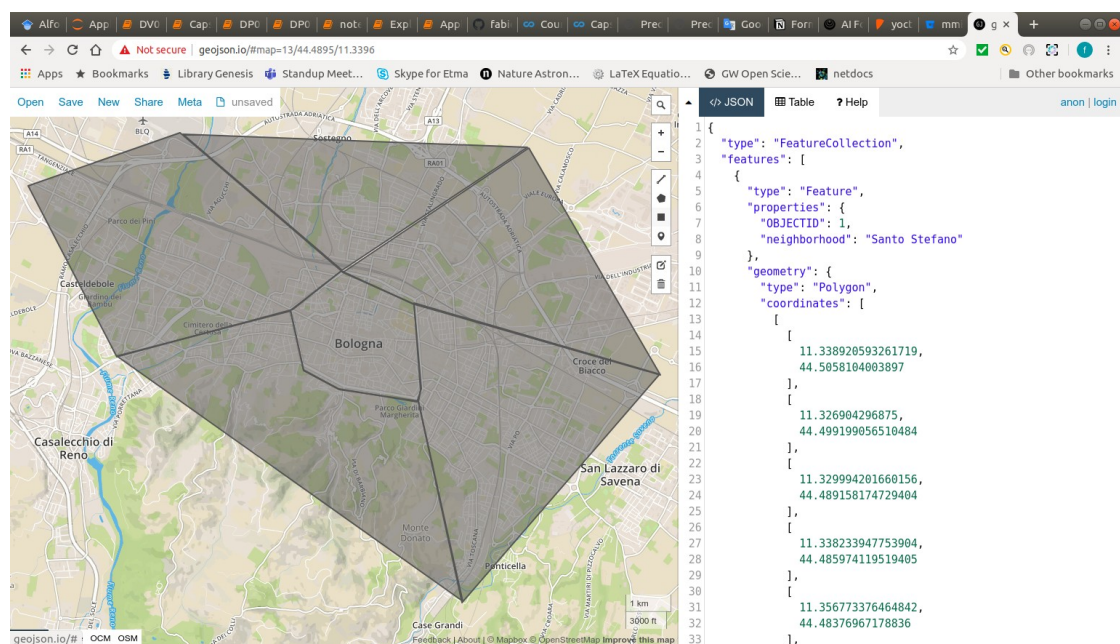
Unfortunately the 'geojson' file wasn't available from the web for the Bologna city area. So I had to built by myself using the helpful website geojson.io.

So we have been able to display a Choropleth of the Bologna area.
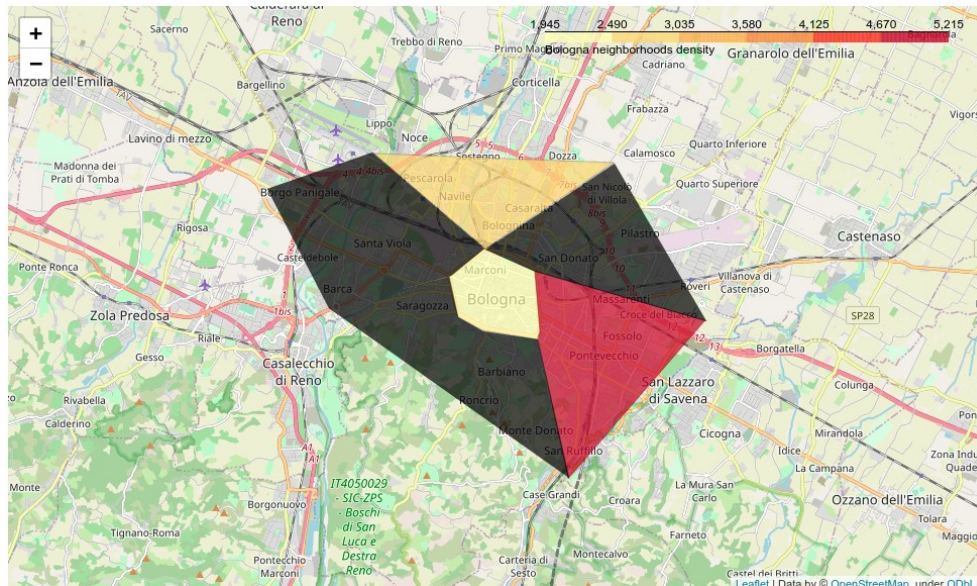
Explore the University of Bologna's neighborhood

Founded in 1088 by an organised guild of students, it is the oldest university in the world, as well as one of the leading academic institutions in Italy and Europe. It is one of the most prestigious Italian universities, commonly ranking in the first places of national ranking. It was the first place of study to use the term *universitas* for the corporations of students and masters, which came to define the institution (especially its famous law school) located in Bologna.
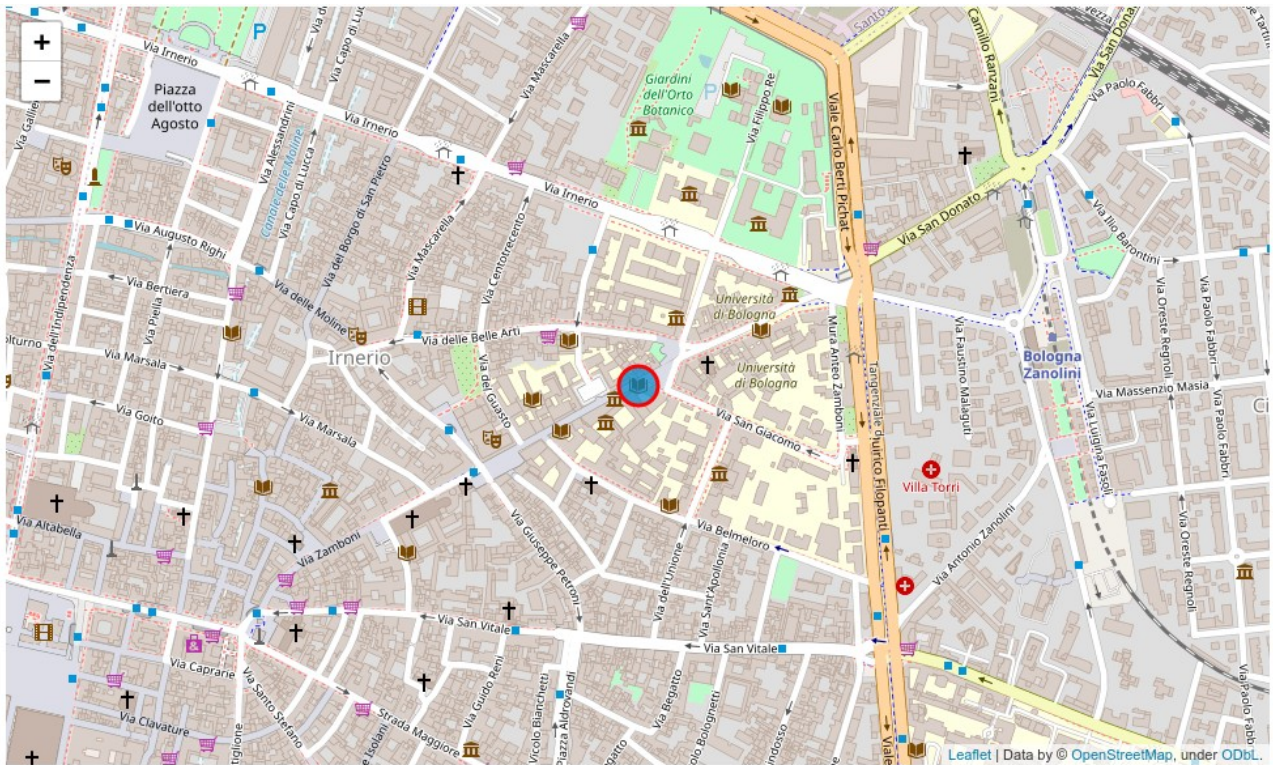
Let's take a look around the university.

Within 500 meters Foursquare found 33 venues. If the search radius is brought to 1Km the found venues rise to 100. We also try to find how many tips there are for each of the venues. Here below an excerpt. It sounds as if the University area is really live.

	name	categories	lat	lng	id	tips
0	Museo Di Palazzo Poggi	Science Museum	44.496911	11.352514	51eba116498e1f30b2c435f6	7
1	Hamerica's	Burger Joint	44.497246	11.353017	58bf1290d8b0ed09583b894d	4
2	Accademia delle Belle Arti	College Arts Building	44.498358	11.352895	4cbecf06575d236a25ddba8e	3
3	Teatro Comunale	Opera House	44.496524	11.349929	4c078ae18b4520a1f2038797	13
4	Cento3cento Veg	Vegetarian / Vegan Restaurant	44.498655	11.350813	52276b9711d22a48a5362ad4	15
5	Caffetteria Al Salam	Mediterranean Restaurant	44.498798	11.350818	4bb345cd42959c747ab1212c	10
6	Orto Botanico	Garden	44.499682	11.352944	4de3877ad164df8575143811	7
7	Moustache	Cocktail Bar	44.498138	11.349275	4dda8ea9b0fb8af380d03420	23
8	Pasticceria Dell'arte	Café	44.497536	11.348797	4df1b15dd4c01ff6b2e4c19f	5
9	Baracca e Burattini	Café	44.499493	11.351194	560434ae498ed26b4a185414	3
10	Dopa Hostel	Hostel	44.499425	11.351310	582b7566c0633a7aa59158c7	4
11	BOtanique	Music Venue	44.499931	11.354572	4c2e43f0987f20a124e14aaa	8
12	Va Mo Lá	Italian Restaurant	44.498158	11.347478	5643a4e0498ed53f613002d2	12
13	Camera a Sud	Wine Bar	44.496336	11.347152	4bbb5c21b35776b01cdacb01	87
14	Breaking Toast	Sandwich Place	44.500167	11.348840	5811bff638fa82d3effeddad	28
15	Pane e Panelle	Italian Restaurant	44.494087	11.355204	4d8204670d5b8cfa38a24a28	17
16	Jukebox Cafe	Burger Joint	44.497297	11.347512	554d5848498eae48caf93892	15
17	Carpe Diem Bar Bologna	Cocktail Bar	44.499151	11.357874	4eb11ac79a52c49f4cd74ebe	4
18	Asia Mach	Supermarket	44.501398	11.352086	4c0e2e5e98102d7f992ce306	7
19	Antica Stuzzicheria	Pub	44.500016	11.350694	4c59a039aeb7b713ad6e73cd	14

In the figure below I have drawn a bubble picture with circles of radius proportional to the number of tips for some of the points of interest around the university.
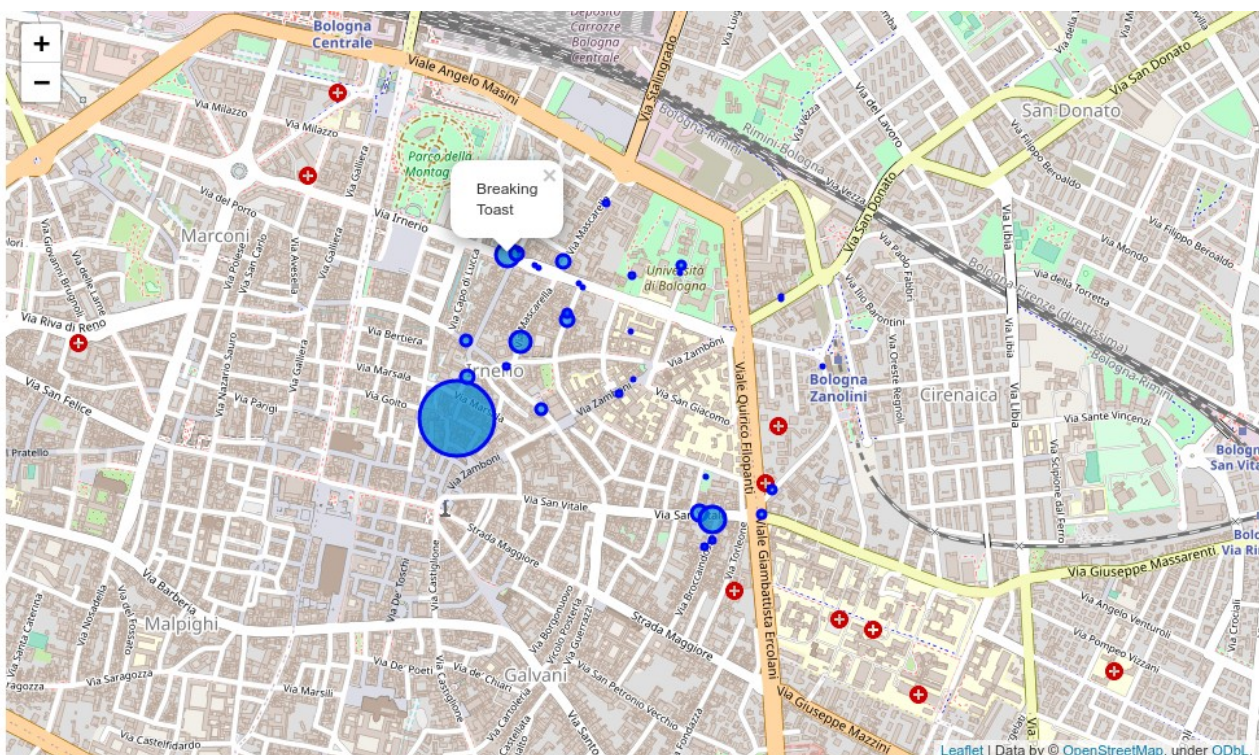
Explore Bologna's Neighborhoods

I have created a function to repeat the same process as for the University area to all the neighborhoods in Bologna. Then I have evaluated how many venues were returned for each neighborhood. Here below the results.

Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Borgo Panigale-Reno	8	8	8	8	8	8
Navile	18	18	18	18	18	18
Porto-Saragozza	4	4	4	4	4	4
San Donato-San Vitale	18	18	18	18	18	18
Santo Stefano	49	49	49	49	49	49
Savena	8	8	8	8	8	8

The 'Santo Stefano' neighborhood is the most crowded for sure! I guess that this is the most interesting area where opening my Sushi Bar. There are 54 uniques categories.

Let's print each neighborhood along with the top 5 most common venues.

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	11th Most Common Venue	12th Most Common Venue
0	Borgo Panigale-Reno	Café	Hotel	Soccer Field	Italian Restaurant	Pub	Restaurant	Pool	Butcher	Brewery	Furniture / Home Store	Food Stand	Food & Drink Shop
1	Navile	Café	Women's Store	Pizza Place	Candy Store	Cosmetics Shop	Department Store	Food Stand	Gastropub	Ice Cream Shop	Italian Restaurant	Mobile Phone Shop	Park
2	Porto-Saragozza	Scenic Lookout	Food & Drink Shop	Park	Women's Store	Cupcake Shop	Grocery Store	Gastropub	Furniture / Home Store	Food Stand	Fish Market	Fast Food Restaurant	Emilia Restaurant
3	San Donato-San Vitale	Clothing Store	Furniture / Home Store	Pizza Place	Sandwich Place	Park	Pharmacy	Pool	Department Store	Electronics Store	Café	Shopping Mall	Fast Food Restaurant
4	Santo Stefano	Italian Restaurant	Plaza	Ice Cream Shop	Sandwich Place	Wine Bar	Bakery	Bar	Bistro	Café	Monument / Landmark	Cupcake Shop	Chinese Restaurant
5	Savena	Supermarket	Gym	Bar	Italian Restaurant	Park	Emilia Restaurant	Women's Store	Department Store	Gastropub	Furniture / Home Store	Food Stand	Food & Drink Shop

Considerations

•'Santo Stefano' is full of Italian restaurants, Bars, Bistros, Ice cream shop. Further 'Santo Stefano' has the lowest density of population. It means that this is a touristic area, not a residential one.

•"Santo Donato - San Vitale" neighborhood is equipped with many appliance stores, music, fast food restaurants, and a mall. It therefore looks like a commercial area where people go shopping and maybe consume something. It does not seem suitable for opening a high-level place aimed at young people.

•The area named 'Porto Saragozza' is a re residential zone. If offers a mix of food shops, markets, restaurants, electronic stores. It is not interesting to open a Sushi Bar.

•The area 'Navile' could be a good candidate: some Asian Restaurants, Coffee Bars, Gastropub, Italian Restaurants. I'd like to place my Sushi Bar closer to other Asian restaurants, I could grab them some customers...

•Borgo Panigale is too far from the downtown. In addition it seems to be a residential area.

•Savena has the highest density of population. So I guess this is not a touristic area. I will not take it into consideration.

So at the end of day the choice will be between 'Santo Stefano' and 'Navile'.
I need some additional criteria to take the final decision.
Let's try to understand how each is far from university. The distance of each neighborhood center from the University is shown in the following picture.

	neighborhood	area	inhabitants	density	sub district	latitude	longitude	distances
0	Borgo Panigale-Reno	31.436	61141.0	1944.935742	Borgo Panigale, Casteldebole, La Birra, Barca,...	44.521942	11.271077	477.917737
1	San Donato-San Vitale	26.268	66297.0	2523.869347	San Donato, San Vitale, San Donnino, Pilastro,...	44.511899	11.395177	251.247506
2	Navile	25.875	69187.0	2673.893720	Lame, Corticella, Bolognina	44.518470	11.328901	190.131989
3	Porto-Saragozza	15.766	69477.0	4406.761385	Andrea Costa-Saragozza, Malpighi, Marconi, Saf...	44.477876	11.304899	294.806407
4	Santo Stefano	30.040	64258.0	2139.081225	Galvani, Irnerio, Murri, Colli, Roncrio, Barbi...	44.492055	11.349035	39.000077
5	Savena	11.469	59810.0	5214.927195	Mazzini, San Ruffillo, Fossolo, Pontevecchio, ...	44.466926	11.376817	233.931813

Woow! Santo Stefano is really close to the University. This means that there is a lot of young people nearby. So defintely I decide to select' Santo Stefano' area as location for the new Sushi Bar. Here below a shore description of the area.

Santo Stefano

This area is considered the richest in the city, the wealth that has characterized the neighborhood since the beginning gives young inhabitants the stereotype of a medium-high lifestyle, with fashionable clothing, expensive cars and the use of luxury products . Furthermore, property prices in this area are to be considered the highest in the entire metropolitan area of Bologna.
The neighborhood is known for being one of the most elegant areas of the city. Here, in fact, many families belonging to the high society lived and still live there. The historic buildings, some still owned by these well-known families, are distributed on the right and left of the street starting from the door and then reaching the synonymous square (voted among the most beautiful in Italy).

Once I have identified the neighborhood I try to understand which is the area with the most Japanese restaurants. My goal is to open right in their vicinity and steal some of the customers who frequent those restaurants.

	name	categories	address	lat	lng	labeledLatLngs	distance	postalCode	cc	city	state	country	formattedAddress
0	Seta Sushi Lab	Sushi Restaurant	Corte Isolani	44.493291	11.348653	[{'label': 'display', 'lat': 44.493291, 'lng':...	140	40125	IT	Bologna	Emilia-Romagna	Italia	[Corte Isolani, 40125 Bologna Emilia-Romagna, ...
1	Arigato Wok Sushi	Chinese Restaurant	NaN	44.495333	11.346369	[{'label': 'display', 'lat': 44.4953325, 'lng'...	421	NaN	IT	NaN	NaN	Italia	[Italia]
2	Sushiman	Sushi Restaurant	via san vitale 4/d	44.494460	11.347601	[{'label': 'display', 'lat': 44.49446, 'lng': ...	290	40125	IT	Bologna	Emilia-Romagna	Italia	[via san vitale 4/d, 40125 Bologna Emilia-Roma...
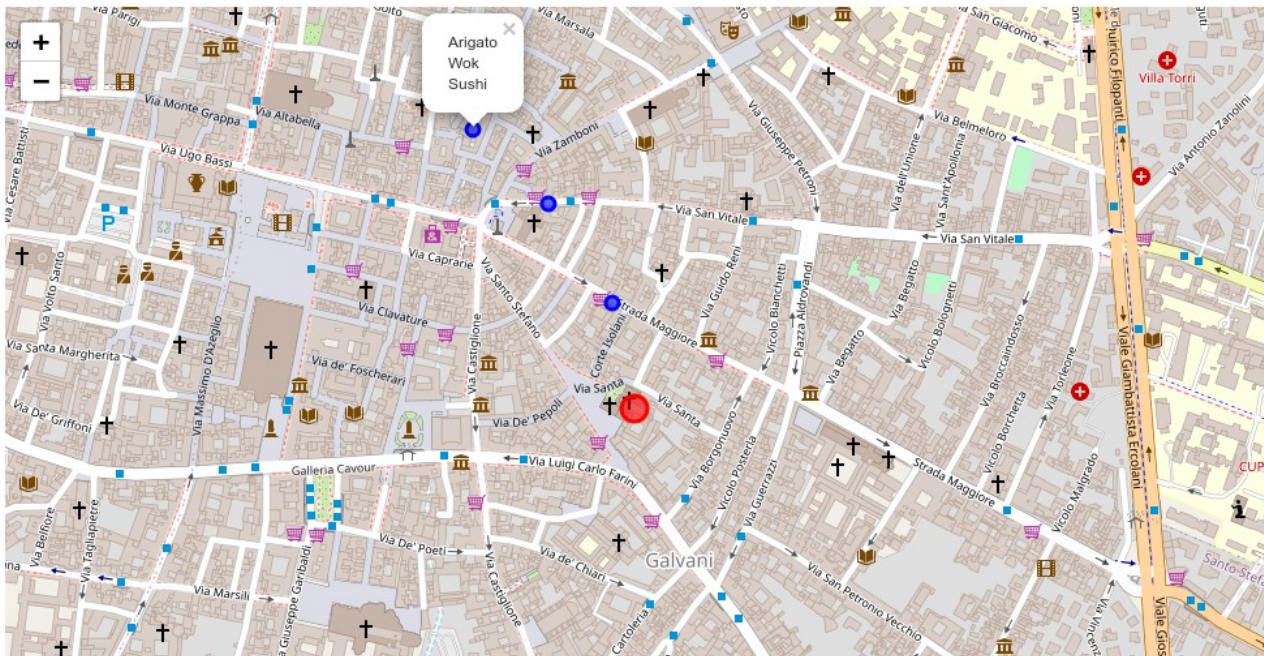
They seems to be a bit expensive according the info retrieved by Foursquare.

	name	price
0	Seta Sushi Lab	Expensive
1	Arigato Wok Sushi	Moderate
2	Sushiman	Expensive

Conclusion

- The goal of the analysis was to identify a location where to open a Sushi Bar in Bologna.

- I have the ambition to open the new restaurant in the most exclusive area of Bologna.

- It would be nice if the location was close to the university because this would attract many young people.

The first problem was to identify the neighborhoods of the city of Bologna. The data were taken from a wikipedia page (https://it.wikipedia.org/wiki/Quartieri_di_Bologna). After some cleaning I was able to have a dataframe with some information for each Bologna neighborhood.
The information available for each neighborhood is listed below:

- neighborhood name

- area

- inhabitants

- density

- sub district

A graphical representation (both as a pie chart and as a choropleth) of the population density by neighborhood was therefore provided: it is a very important parameter for choosing the place to rent. Therefore neighborhoods with high density and others with clearly lower density have been identified. A neighborhood with a high density of resident population is not said to be frequented by many tourists. It could be a residential neighborhood and therefore not suitable for the opening of a trendy restaurant.

Using the APIs provided by Foursquare it was possible to explore the main points of interest of each neighborhood. By performing a groupby of the result, it was possible to deduce that the Santo Stefano district is certainly the one with the highest number of points of interest. For each venue, the 5 main attractions were listed (those with the highest frequency) and therefore considerations were made regarding the different types of points of interest. From this analysis, the choice was reduced to a couple of neighborhoods: Santo Stefano and Navile.

To understand who to choose we need another criterion of analysis. Since we want our new Sushi Bar to be frequented by young people, we try to calculate the distance of each of the two districts from the famous university of Bologna, one of the most ancient in Italy. Doing that we have realized that the university is inside the area of Santo Stefano. So that will be our choice.

In order to identify the most suitable area of Santo Stefano to open a Sushi Bar we performed another search using the Foursquare API. We realized that in the Santo Stefano district there is an area near the university with 3 Sushi restaurants. In any case, if we want to try to steal customers from these restaurants, it makes sense to open the Sushi bar near other Japanese restaurants. We will certainly do better!

I hope you will join my Sushi Bar "Don't stop your appetite!"

Enjoy your meal! Buon appetito! disfruta tu comida! genieße dein Essen!