I) Introduction

a. Backgroud

Paris is the most visited capital in the world. About 50 million tourists visited Paris in 2018. The city is known for its monuments, as well as for its gastronomy.
A huge number of visitors and residents of Paris take advantage of the multitude of restaurants, shops and activities that the city offers. The city is also known for its ethnic, cultural diversity which allows a cultural richness.
Thanks to this wealth, Paris has seen the emergence of many different restaurants such as Asian restaurants, Italian restaurants, etc…

b. Problem

Paris offers many restaurants. Suppose I want to open a Japanese restaurant. I need to know where is the best place to open my restaurant. That is to say analyze the restaurant in each borough and look at the proportion of Japanese restaurant, also take into account the data on the population (age, young people, median income), the price for the rental of the room

c. Interest

The interest of this project is that I will be able to make the best choice to open my restaurant while minimizing competition, by providing a targeted service in relation to the population of the neighborhood, so I will be able to adapt my offers and be competitive.

II) Data

Based on definition of our problem, factors that will influence our decision are:

- **Number of Japanese restaurants in Borough**
- **Characteristic of people in Borough**
- **Price for the rental**

So the following will be needed to solve the probleme :

1) https://fr.wikipedia.org/wiki/Liste_des_quartiers_administratifs_de_Paris contains the informations of the name and the different neighbordhood in each borough

Quartiers administratifs depuis 1860 [modifier | modifier le code]

Arrondissement[1, n 1]	Quartiers		Population en 1999 (hab.)[2]	Superficie (ha)[2]	Densité hab/km²	Plan
1er arrondissement dit « du Louvre »	1er	Saint-Germain-l'Auxerrois	1 672	86,9	1 924	
	2e	Halles	8 984	41,2	21 806	
	3e	Palais-Royal	3 195	27,4	11 661	
	4e	Place-Vendôme	3 044	26,9	11 316	
2e arrondissement dit « de la Bourse »	5e	Gaillon	1 345	18,8	7 154	
	6e	Vivienne	2 917	24,4	11 955	
	7e	Mail	5 783	27,8	20 802	
	8e	Bonne-Nouvelle	9 595	28,2	34 514	
3e arrondissement dit « du Temple »	9e	Arts-et-Métiers	9 560	31,8	30 063	
	10e	Enfants-Rouges	8 562	27,2	31 478	
	11e	Archives	8 609	36,8	23 394	
	12e	Sainte-Avoye	7 501	21,3	35 216	
4e arrondissement dit « de l'Hôtel-de-Ville »	13e	Saint-Merri	6 523	31,3	20 840	
	14e	Saint-Gervais	10 587	42,2	25 088	
	15e	Arsenal	9 474	48,7	19 454	
	16e	Notre-Dame	4 087	37,9	10 784	

2) https://www.apur.org/dataviz/portraits-metropole-grand-paris-donnees/?fbclid=IwAR13J2vJTTG6ZDpsGJgicSaOkJN1EILnH-GGtyiEDD6yUtypq9cqIC50l7k
Characteristic of people in each borough. We choose only certain informations and put in a csv

Postal Code	Municipal population	Young people	Old people	Student	Median income	Employment density	Sale price
75001	16545,00	15,30	18,70	8,50	31843,00	328,00	11290,00
75002	20796,00	15,70	10,10	8,90	30025,00	603,00	11270,00
75003	35049,00	15,60	13,20	9,60	30988,00	267,00	11240,00
75004	27146,00	15,70	17,10	10,10	30515,00	260,00	12300,00
75005	59333,00	17,80	18,80	16,50	32950,00	211,00	11330,00
75006	42428,00	19,00	22,70	15,50	38448,00	206,00	12530,00
75007	54133,00	18,60	20,90	10,80	41949,00	174,00	12400,00
75008	36694,00	20,70	16,50	9,90	39774,00	440,00	9890,00
75009	59408,00	18,80	13,00	8,20	32771,00	530,00	9910,00
75010	91770,00	19,70	11,10	7,40	25154,00	291,00	8850,00
75011	149834,00	16,10	14,20	8,50	26253,00	223,00	9190,00
75012	142340,00	18,90	11,20	8,00	26729,00	74,00	8620,00
75013	183216,00	19,60	17,40	9,90	23538,00	177,00	8380,00
75014	139992,00	17,70	18,20	12,10	27233,00	147,00	9430,00
75015	234994,00	18,60	17,50	9,10	30227,00	201,00	9140,00
75016	165487,00	20,60	22,60	9,40	38299,00	70,00	9820,00
75017	168533,00	19,70	15,30	8,10	29872,00	188,00	9400,00
75018	197580,00	18,70	12,90	7,10	20942,00	147,00	8560,00
75019	185654,00	23,50	13,80	6,60	19137,00	132,00	7630,00
75020	195556,00	20,90	14,50	6,40	20632,00	128,00	7890,00

I choose to keep : Number of people, the proportion of young people, old people and student. The median income to analyze if the borough is rich. The employment density to see if there are lot of worker in the borough and finaly, the sale price for the rental.

3) Foursquare API to find the restaurant in each Borough
4) Geopy to find the location of each borough.