



BATTLE OF NEIGHBORHOODS:

BEST PLACE TO OPEN A DINE-OUT PLACE IN LOS ANGELES

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2021-03-25

INTRODUCTION

Los Angeles is a big and diverse city where there are a lot of opportunities for those who want to start a business as well as risks of doing so. If someone wants to open a dine-out place:

- He needs to get a better understanding of what kind of venues are the most popular in Los Angeles;
- He has to find out where could be the best place to open one.

DATA

SOURCES:



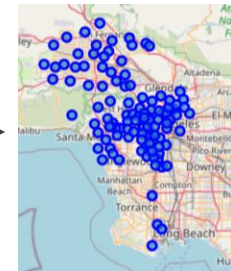
METHODS TO GET/PROCEED DATA:

BeautifulSoup



ONE HOT ENCODING

DATA:



LA neighborhoods

Income
20606
65649
31423
53872
37948

Income rate

	Rank	Neighborhood	Per Capita	Total
0	1	Elysian Park	263.2	70
1	2	Fairfax	251.5	336
2	3	Beverly Grove	243.3	556
3	4	Playa Vista	231.3	139
4	5	Rancho Park	199.7	91

Crime rate

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
0 Adams Normande	Bar	Gas Station	Park	Grocery Store	Playground	Taco Place	Latin American Restaurant	Women's Store	Ethiopian Restaurant	Event Service
1 Arista	Bakery	Flower Shop	Convenience Store	Historic Site	Video Store	Farm	Escape Room	Ethiopian Restaurant	Event Service	Fabric Shop
2 Arlington Heights	Seafood Restaurant	Shop & Service	Grocery Store	Rental Car Location	Restaurant	Donut Shop	Cafe	Escape Room	Women's Store	Event Service
3 Alhambra Village	Food Truck	Mobile Phone Shop	Chinese Restaurant	Fast Food Restaurant	Ice Cream Shop	Diner	Steakhouse	Spa	Shoe Store	Coffee Shop
4 Baldwin Hills / Crenshaw	Flower Shop	Clothing Store	Women's Store	Escape Room	Food Stand	Food Service	Food Court	Food	Filipino Restaurant	Fast Food Restaurant

TOP venues

METHODOLOGY

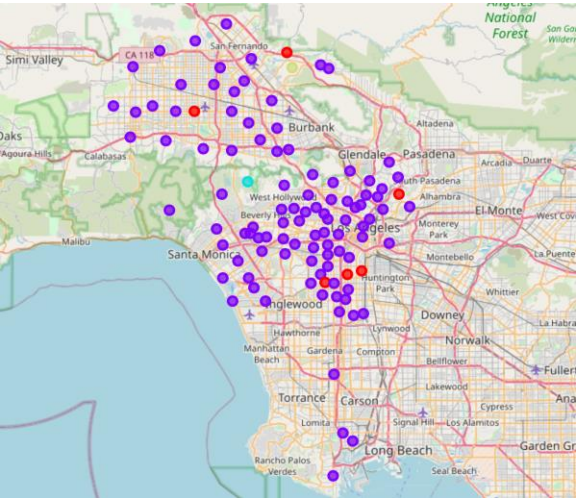
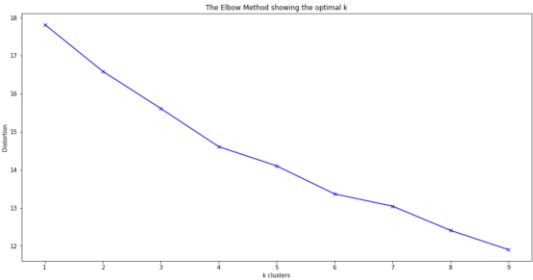
METHOD	PURPOSE
ELBOW METHOD	To find out how many clusters I should choose for k-means analysis
K-MEANS CLUSTERING	To cluster Los Angeles' neighborhoods and find where the dine-out places are the most popular
WORD CLOUD	To find out what kind of dine-out places are the most popular
str.contains	To count all the venues in the neighborhood, which are restaurant type, in purpose to calculate the Restaurants' preference rate
PEARSONS' CORRELATION COEFFICIENT	To check if there is a relationship between the median income of the neighborhood and its Restaurants' preference rate
BUBLE CHART	To examine in what neighborhoods dining out in the restaurants is the most popular thing

NEIGHBORHOOD CLUSTERS

Elbow method indicated
that the optimum number
of k-means clusters is 4:

Clustered neighborhoods
of Los Angeles:

Our target:
neighborhoods in Cluster 1
(where it is popular to go for a
dine-out)



Out [24]:

	Neighborhood	Cluster Labels	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
0	Adams Normandie	1	Sushi Restaurant	Gas Station	Park	Grocery Store	Playground	Taco Place	Latin American Restaurant	Women's Store	Ethiopian Restaurant	Event Service
1	Arlota	1	Bakery	Flower Shop	Convenience Store	Historic Site	Video Store	Farm	Escape Room	Ethiopian Restaurant	Event Service	Fabric Shop
2	Arlington Heights	1	Seafood Restaurant	Shop & Service	Grocery Store	Rental Car Location	Restaurant	Donut Shop	Café	Escape Room	Women's Store	Event Service
3	Atwater Village	1	Food Truck	Mobile Phone Shop	Chinese Restaurant	Fast Food Restaurant	Ice Cream Shop	Diner	Steakhouse	Spa	Shoe Store	Coffee Shop
4	Baldwin Hills / Crenshaw	1	Flower Shop	Clothing Store	Women's Store	Escape Room	Food Stand	Food Service	Food Court	Food	Filipino Restaurant	Fast Food Restaurant
...
103	Westlake	1	Sandwich Place	Mexican Restaurant	Pharmacy	Paper / Office Supplies Store	Pizza Place	Thai Restaurant	Coffee Shop	Bakery	Bank	Furniture / Home Store
104	West Los Angeles	1	Clothing Store	Fast Food Restaurant	Asian Restaurant	Bed & Breakfast	Sandwich Place	Grocery Store	Donut Shop	Coffee Shop	Supermarket	Thai Restaurant
106	Wilmington	1	Grocery Store	Burger Joint	Seafood Restaurant	Mobile Phone Shop	Pizza Place	Chinese Restaurant	Discount Store	Pharmacy	Video Store	Bank
108	Winnetka	1	Ice Cream Shop	Latin American Restaurant	Food	Fried Chicken Joint	South American Restaurant	Filipino Restaurant	Mexican Restaurant	Grocery Store	Bar	Home Service
109	Woodland Hills	1	Sushi Restaurant	Ice Cream Shop	Mediterranean Restaurant	Burger Joint	Shipping Store	Chinese Restaurant	Pharmacy	Bagel Shop	Indian Restaurant	Mexican Restaurant

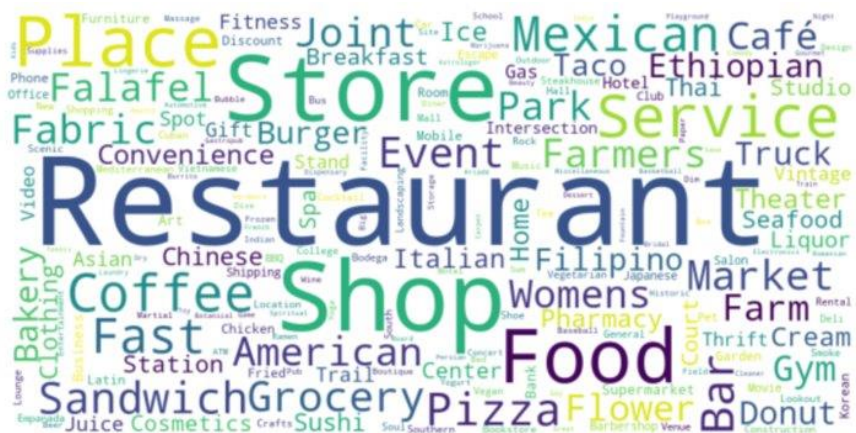
100 rows x 12 columns

RESTAURANTS' PREFERENCE

Word cloud determined the most popular venue category type – the Restaurant:

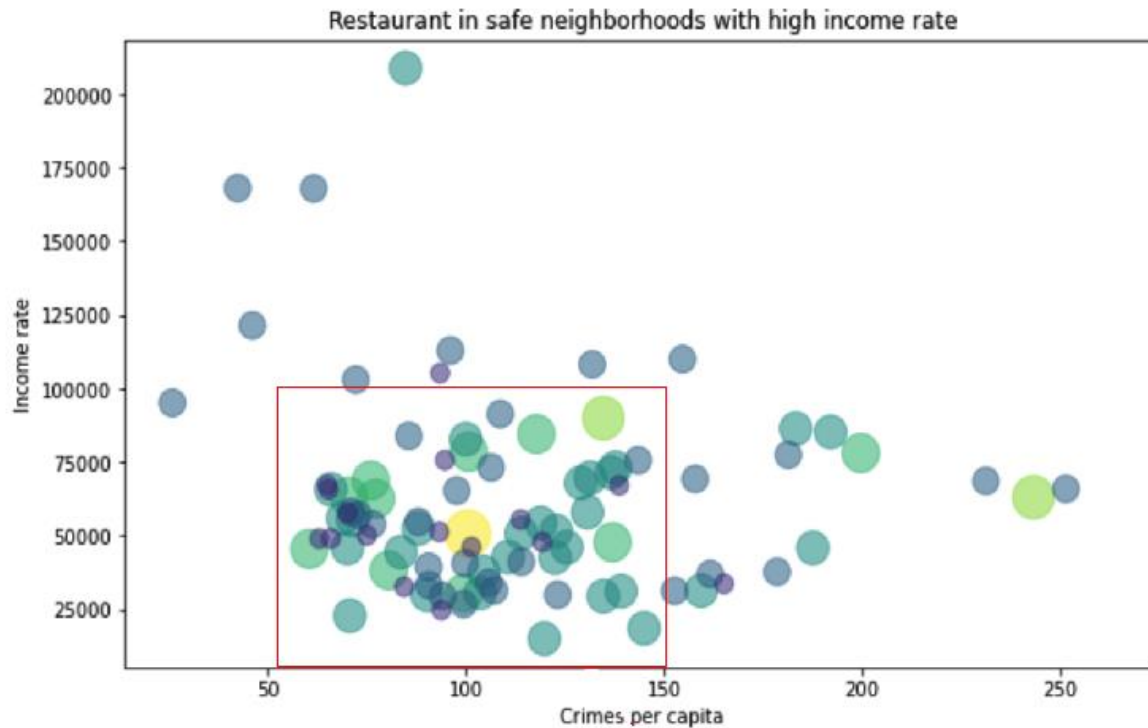
Restaurants' preference rate:

how many out of 10 most popular venues in that neighborhood are restaurant type. It shows how strong people prefer restaurants in the neighborhood among other dine-out places



Cluster Labels	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	Restaurants
1	Thai Restaurant	Coffee Shop	Mediterranean Restaurant	Mexican Restaurant	Gym	Burger Joint	Theater	Indian Restaurant	Cuban Restaurant	Italian Restaurant	6
1	Clothing Store	Juice Bar	Cosmetics Shop	Chinese Restaurant	Vegetarian / Vegan Restaurant	Mexican Restaurant	Lingerie Store	Sushi Restaurant	Café	Seafood Restaurant	5
1	Sushi Restaurant	Ice Cream Shop	Mediterranean Restaurant	Burger Joint	Shipping Store	Chinese Restaurant	Pharmacy	Bagel Shop	Indian Restaurant	Mexican Restaurant	5
1	Shipping Store	American Restaurant	Mexican Restaurant	Clothing Store	Salon / Barbershop	Coffee Shop	Sushi Restaurant	Seafood Restaurant	Bank	Bakery	4
1	Mexican Restaurant	Pizza Place	Vegetarian / Vegan Restaurant	Sushi Restaurant	Sandwich Place	Coffee Shop	Latin American Restaurant	Bus Station	Bakery	Donut Shop	4

INCOME / CRIME RATES



- There is no relationship between the median **income** people earn in that neighborhood and their preference of going to the restaurants.

- Pearson's correlation coefficient also indicates this:

Out[37]:

	restaurants	income
restaurants	1.000000	-0.012711
income	-0.012711	1.000000

- Restaurants are more popular in **safe** neighborhoods, where crimes per capita are smaller.

NEIGHBORHOOD EVALUATION CRITERIA

Should be from cluster 1,
where dine-out places are
popular

Should have a high restaurants'
preference rating
(at least 4 out of 10 most
popular venues in that
neighborhood are restaurant
type)

Should be a quiet safe
neighborhood
(crimes per capita are less than
150)

I also added to this list a
neighborhood, which has a bit
smaller Restaurants' preference
rating (equal to 3), but is in a
safe neighborhood and has an
extremely high-income rate

RESULTS



It is recommended to
open a **RESTAURANT**
in one of those Los Angeles
neighborhoods

- Palms
- Woodland Hills
- Chatsworth
- Encino
- Sunland
- Del Rey
- Winnetka
- Larchmont
- Highland Park
- West Adams
- Korea Town
- Bel-Air