CAPSTONE PROJECT

XAVIER MAGAÑA

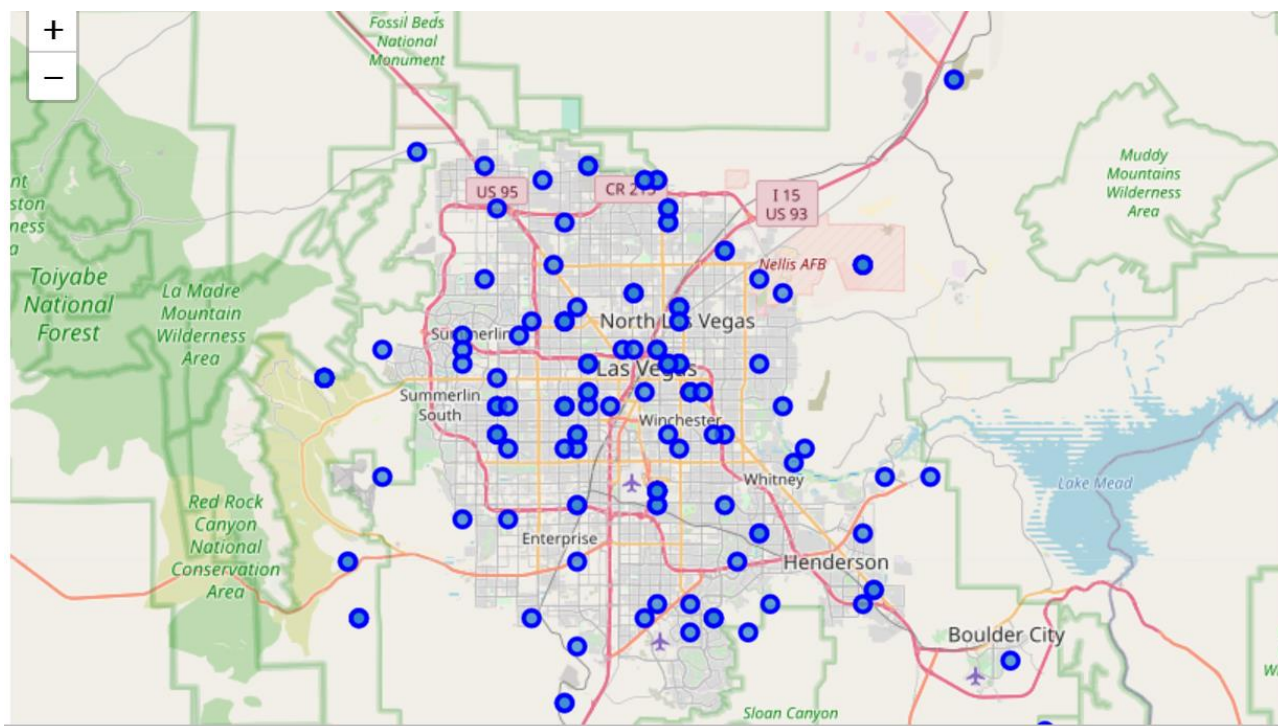## NEVADA DATAFRAME

- Obtained on the Kaggle website.
- Variables to use:
  - Latitude
  - Longitude
  - City
  - Zipcode

	RecordNumber	Zipcode	ZipCodeType	City	State	LocationType	Lat	Long	Xaxis	Yaxis	Zaxis	WorldRegion	Country
0	41350	89001	STANDARD	ALAMO	NV	PRIMARY	37.27	-115.20	-0.33	-0.71	0.60	NaN	US
1	41351	89001	STANDARD	RACHEL	NV	NOT ACCEPTABLE	37.27	-115.20	-0.33	-0.71	0.60	NaN	US
2	41352	89001	STANDARD	TEMPIUTE	NV	NOT ACCEPTABLE	37.27	-115.20	-0.33	-0.71	0.60	NaN	US
3	41353	89017	STANDARD	HIKO	NV	PRIMARY	37.72	-115.33	-0.33	-0.71	0.61	NaN	US
4	41354	89017	STANDARD	ALAMO	NV	NOT ACCEPTABLE	37.72	-115.33	-0.33	-0.71	0.61	NaN	US

DATAFRAME WITH MAIN VARIABLES

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	LocationText	City	Zipcode	Lat	Long
0	Alamo, NV	ALAMO	89001	37.27	-115.20
1	Rachel, NV	RACHEL	89001	37.27	-115.20
2	Tempiute, NV	TEMPIUTE	89001	37.27	-115.20
3	Hiko, NV	HIKO	89017	37.72	-115.33
4	Alamo, NV	ALAMO	89017	37.72	-115.33

MAP WITH COORDINATES

FOURSQUARE API

- Coordinates

- City of the restaurants

- Category of the venue

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	City	City Latitude	City Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	BOULDER CITY	35.96	-114.83	Blue Breed Grill	35.960842	-114.830060	Bar
1	BOULDER CITY	35.96	-114.83	The Dirty Irish Saloon	35.962753	-114.833336	Bar
2	BOULDER CITY	35.96	-114.83	Committed Care Experts Carpet Cleaning	35.959109	-114.835441	Home Service
3	CARSON CITY	39.14	-119.71	Carson River Park	39.141567	-119.706068	Park
4	CARSON CITY MALL	39.14	-119.71	Carson River Park	39.141567	-119.706068	Park

NUMBER OF RESTAURANTS

- Head of number of restaurants

- Grouped by city

	Number of restaurants
City	
ARDEN	5
BORDERTOWN	19
BOULDER CITY	2
CITIBANK	10
CITIBANK NV	9

NUMBER OF SPORTS BAR

- Sports Bar restaurants

- Grouped by city

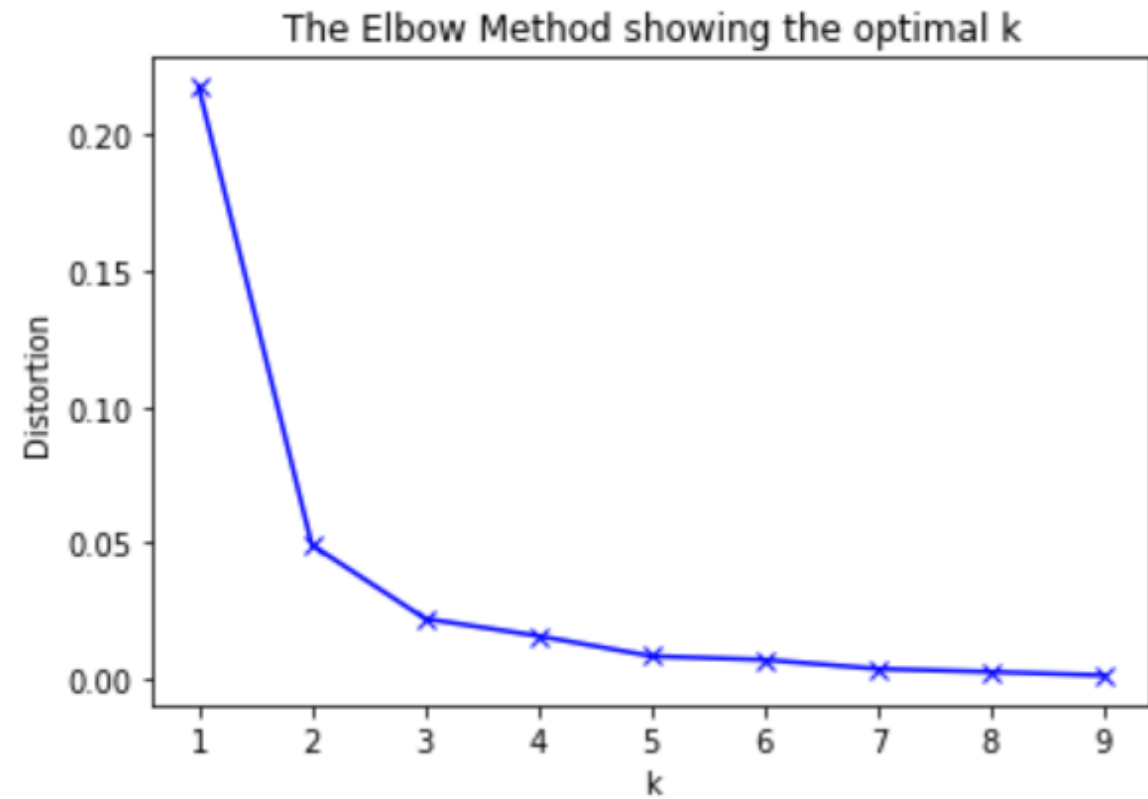|	Number of Sports Bar restaurants
City	
BORDERTOWN	9
BOULDER CITY	2
CITIBANK NV	2
CITY CENTER	1
COLD SPRINGS	9

GENERAL INFORMATION

- Describe function for general information about the variables in the dataframe with the foursquare API table.

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	RecordNumber	Zipcode	Lat	Long	Xaxis	Yaxis	Zaxis	WorldRegion	TaxReturnsFiled
count	552.000000	552.000000	552.000000	552.000000	552.000000	552.000000	552.000000	552.0	552.000000
mean	41841.576087	89330.858696	38.306540	-117.019040	-0.350960	-0.694040	0.614348	0.0	4373.438406
std	2950.228758	255.208818	1.899337	2.093806	0.021479	0.028991	0.026003	0.0	6316.073884
min	41350.000000	88901.000000	35.100000	-119.990000	-0.380000	-0.740000	0.570000	0.0	0.000000
25%	41487.750000	89105.750000	36.200000	-119.610000	-0.380000	-0.730000	0.590000	0.0	0.000000
50%	41625.500000	89406.000000	38.915000	-116.125000	-0.340000	-0.680000	0.620000	0.0	1179.000000
75%	41763.250000	89496.000000	39.532500	-115.140000	-0.340000	-0.670000	0.630000	0.0	7073.000000
max	81659.000000	89883.000000	41.910000	-113.990000	-0.300000	-0.650000	0.660000	0.0	29590.000000

ELBOW METHOD

- 2 clusters to choose.

The Elbow Method showing the optimal k

CLUSTERS MAPPED

- Main cities:
  - Olinghouse
  - Lakeridge
  - Sheelite
  - Las vegas