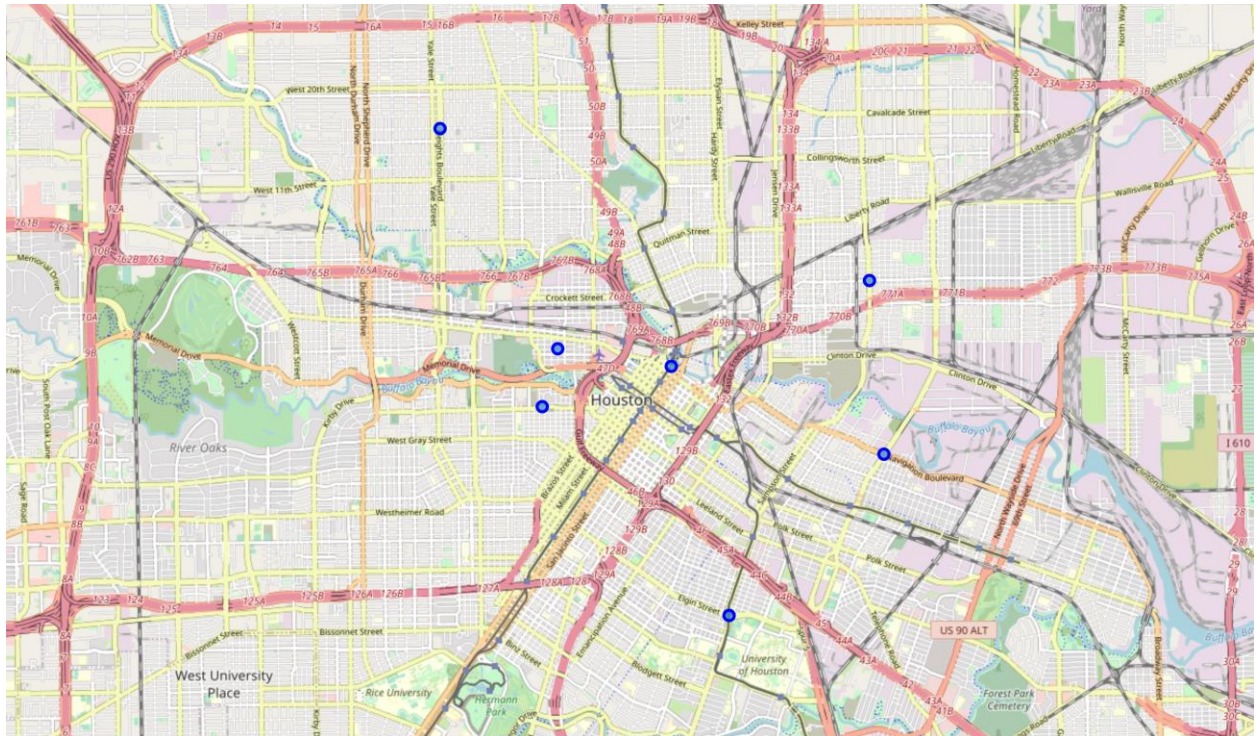


Original Houston Wards and Houston (“The”) Heights dataset including Latitude and Longitude

	Neighborhood	Latitude	Longitude
0	First Ward	29.763800	-95.359500
1	Second Ward	29.751100	-95.324000
2	Greater Third Ward	29.727800	-95.349900
3	Fourth Ward	29.757900	-95.380900
4	Greater Fifth Ward	29.776100	-95.326500
5	Old Sixth Ward	29.766339	-95.378272
6	Houston Heights	29.798100	-95.397900

Map of Houston Wards and Houston (“The”) Heights



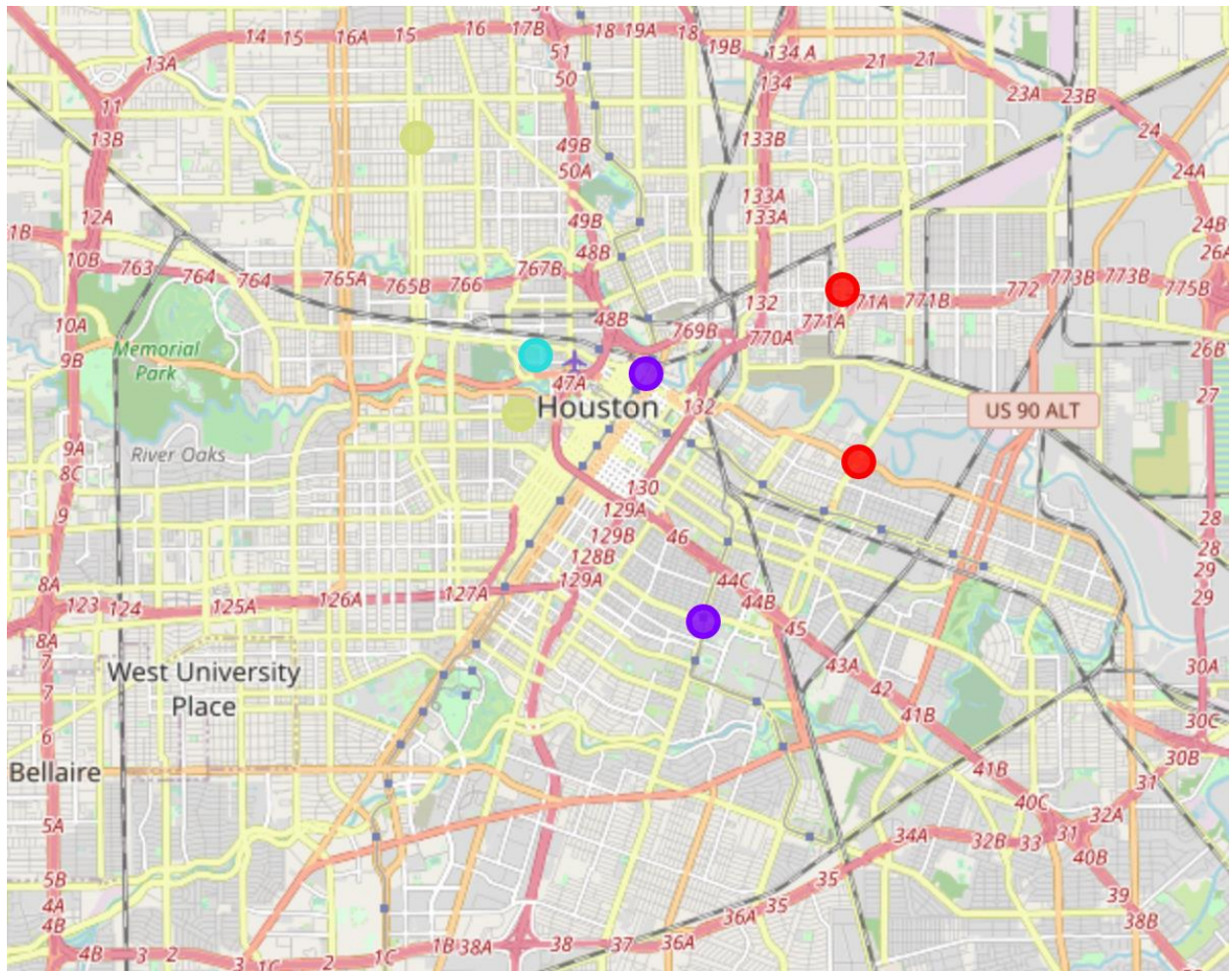
List displays the no. of venues (categories) per region (ward and Houston Heights). The total number of venues is 599 over the 7 regions.

Ward categories		
0	Fifth Ward	70
5	Sixth Ward	74
2	Fourth Ward	75
3	Hou Heights	90
4	Second Ward	90
1	First Ward	100
6	Third Ward	100

List of the Top 10 venues per region (ward and Houston Heights)

Ward	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 Fifth Ward	Mexican Restaurant	Fast Food Restaurant	Gas Station	Fried Chicken Joint	Sandwich Place	Discount Store	Restaurant	Bank	Pizza Place	Beer Garden
1 First Ward	Bar	Hotel	Cocktail Bar	Coffee Shop	Burger Joint	Italian Restaurant	Mexican Restaurant	Pizza Place	Baseball Stadium	Performing Arts Venue
2 Fourth Ward	Bar	Coffee Shop	American Restaurant	Sandwich Place	Hotel	Gym	Restaurant	Pizza Place	Bank	Pub
3 Hou Heights	Coffee Shop	Bakery	Flower Shop	Furniture / Home Store	Sushi Restaurant	Gym / Fitness Center	Sandwich Place	Gift Shop	Restaurant	Juice Bar
4 Second Ward	Mexican Restaurant	Fast Food Restaurant	Bar	Pharmacy	Convenience Store	Music Venue	Dive Bar	Bakery	Snack Place	Bank
5 Sixth Ward	Brewery	Gym	Art Gallery	Fast Food Restaurant	Food Truck	Athletics & Sports	Burger Joint	Clothing Store	Sculpture Garden	Seafood Restaurant
6 Third Ward	Bar	Coffee Shop	Vietnamese Restaurant	Brewery	Food Service	Bakery	American Restaurant	Dive Bar	Burger Joint	Beer Garden

Map of the clustered regions



Regions clustered using Kmeans based on 4 clusters

Cluster 1

	Ward	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	Fifth Ward	Mexican Restaurant	Fast Food Restaurant	Gas Station	Fried Chicken Joint	Sandwich Place	Discount Store	Restaurant	Bank	Pizza Place	Beer Garden
4	Second Ward	Mexican Restaurant	Fast Food Restaurant	Bar	Pharmacy	Convenience Store	Music Venue	Dive Bar	Bakery	Snack Place	Bank

Cluster 2

	Ward	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
1	First Ward	Bar	Hotel	Cocktail Bar	Coffee Shop	Burger Joint	Italian Restaurant	Mexican Restaurant	Pizza Place	Baseball Stadium	Performing Arts Venue
6	Third Ward	Bar	Coffee Shop	Vietnamese Restaurant	Brewery	Food Service	Bakery	American Restaurant	Dive Bar	Burger Joint	Beer Garden

Cluster 3

	Ward	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
5	Sixth Ward	Brewery	Gym	Art Gallery	Fast Food Restaurant	Food Truck	Athletics & Sports	Burger Joint	Clothing Store	Sculpture Garden	Seafood Restaurant

Cluster 4

	Ward	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
2	Fourth Ward	Bar	Coffee Shop	American Restaurant	Sandwich Place	Hotel	Gym	Restaurant	Pizza Place	Bank	Pub
3	Hou Heights	Coffee Shop	Bakery	Flower Shop	Furniture / Home Store	Sushi Restaurant	Gym / Fitness Center	Sandwich Place	Gift Shop	Restaurant	Juice Bar