

# RELOCATING WITH FOURSQUARE

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A PROJECT TO COMPLETE THE APPLIED DATA SCIENCE CAPSTONE

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# RELOCATING WITH FOURSQUARE

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- **BACKGROUND:** I am relocating for a new job. I have offers in two cities and I want to choose the place where I will stay as I am nearing retirement. I am looking for somewhere primarily with a lot of varied dining and, secondarily, some museums and venues for concerts
  - Relocating for a new job can be stressful enough
  - Finding out, after the move, that the area is less-than-desirable can prove traumatic
  - Age and proximity to retirement make relocation decisions even more critical
  - Using tools (above and beyond advised visits to prospective areas) such as Python and the Foursquare API, can assist the decision-making process

# RELOCATING WITH FOURSQUARE

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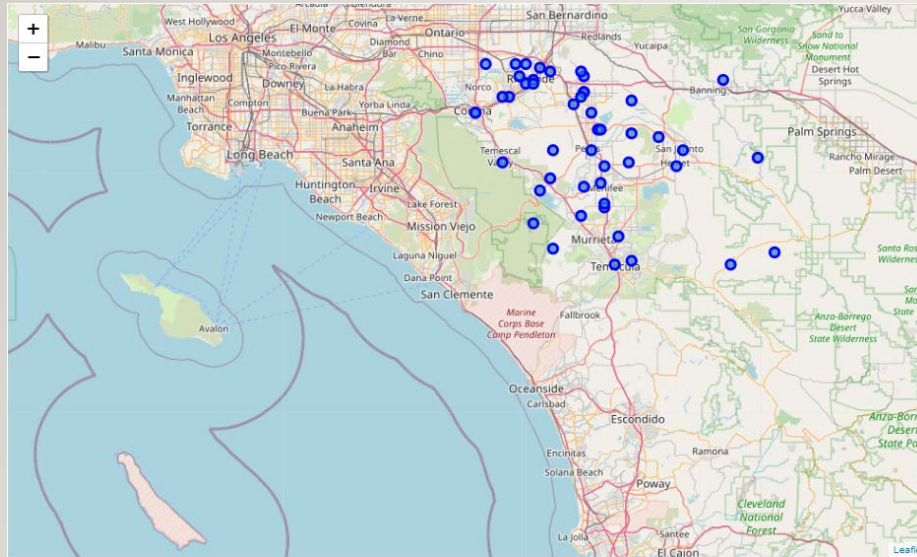
- DATA ACQUISITION & WRANGLING
  - Downloaded zip code information, including latitude and longitude from <http://www.uszipcodelist.com/download.html>
    - This was a comprehensive list that required further subsetting
    - Subset the data in Pandas dataframes for Temecula, CA and Portland, OR based on area codes
  - Data included the main cities in question as well as the surrounding areas
  - Used the Foursquare API to download venues associated with the cities in the subset dataframes
  - Generated initial maps using Folium to get a general gist of the areas



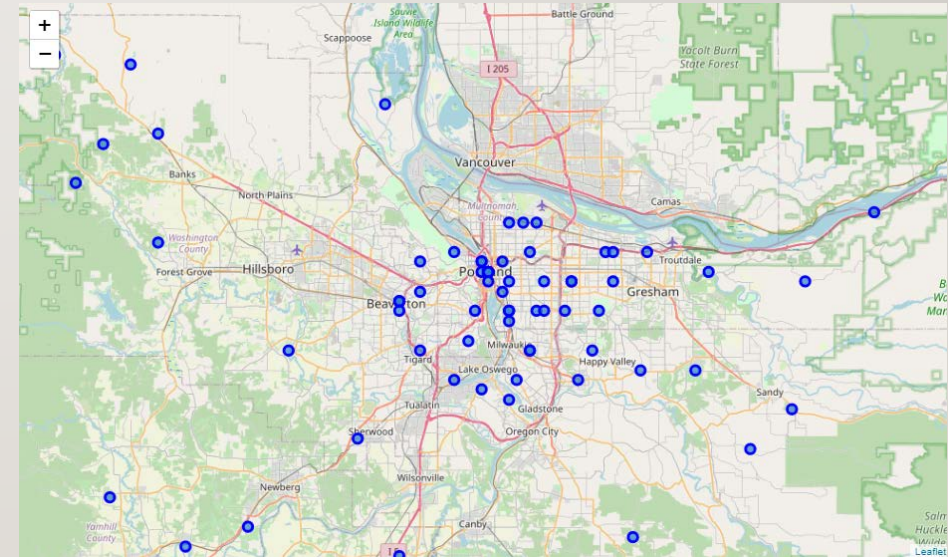
# RELOCATING WITH FOURSQUARE

## DATA ACQUISITION & WRANGLING

### TEMECULA, CA



### PORTLAND, OR



# RELOCATING WITH FOURSQUARE

## DATA ACQUISITION & WRANGLING

### TEMECULA, CA

```
temecula_venues.head()
```

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude
0	Mira Loma	33.99	-117.53	Party Productions	33.987651	-117.531234
1	Banning	33.95	-116.83	Malki Museum	33.949280	-116.834567
2	Riverside	33.98	-117.37	The Old Spaghetti Factory	33.980494	-117.371234
3	Riverside	33.98	-117.37	Riverside Municipal Auditorium	33.982062	-117.371234
4	Riverside	33.98	-117.37	Romano's Riverside	33.981286	-117.371234

### PORTLAND, OR

```
portland_venues.head()
```

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude
0	Aurora	45.23	-122.80	Rome Transportation LLC	45.231671	-122.801234
1	Aurora	45.23	-122.80	XFINITY Store by Comcast	45.228450	-122.801234
2	Aurora	45.23	-122.80	Carpet Cleaning Wilsonville	45.229599	-122.801234
3	Aurora	45.23	-122.80	Sunrise Custom Painting	45.225655	-122.801234
4	Bridal Veil	45.58	-122.11	Cousin's Restaurant & Saloon	45.579640	-122.111234

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# DATA ACQUISITION & WRANGLING

[illegible]



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## DATA ACQUISITION & WRANGLING

- Prioritizing venues based on frequency within the city

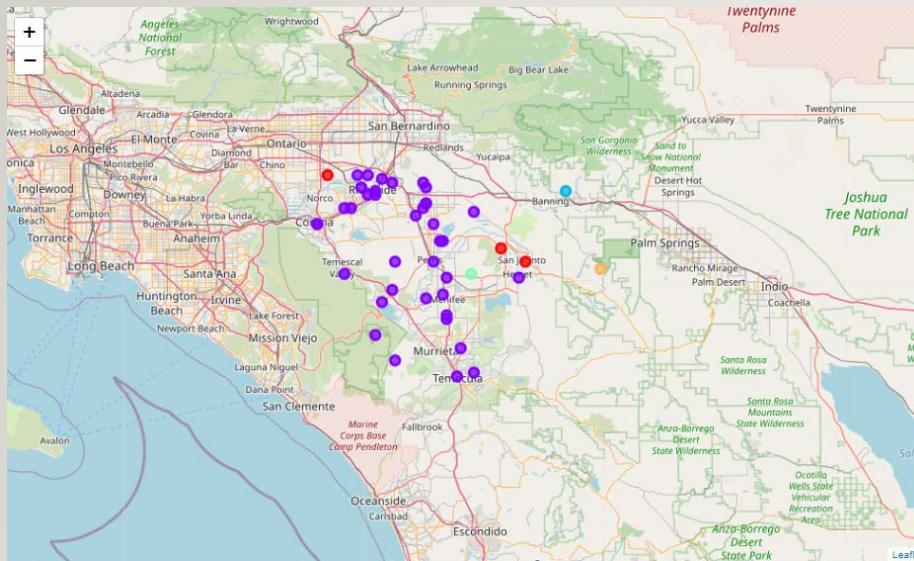
For Temecula:

	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	Banning	Museum	Women's Store	Convenience Store	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop	Farmers Market
1	Corona	Convenience Store	Park	Diner	Women's Store	Deli / Bodega	Department Store	Dessert Shop	Discount Store	Donut Shop	Farmers Market
2	Hemet	Liquor Store	Grocery Store	Sandwich Place	Fried Chicken Joint	Cosmetics Shop	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store
3	Homeland	Home Service	Hot Dog Joint	Cosmetics Shop	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop	Farmers Market
4	Idyllwild	Spa	Women's Store	Fried Chicken Joint	Cosmetics Shop	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop
5	Lake Elsinore	Sandwich Place	Fast Food Restaurant	Pizza Place	Fried Chicken Joint	Convenience Store	Bar	Latin American Restaurant	Cajun / Creole Restaurant	Food	Discount Store
6	March Air Reserve Base	Coffee Shop	Fast Food Restaurant	Women's Store	Convenience Store	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop
7	Menifee	Mobile Phone Shop	Garden Center	Women's Store	Fried Chicken Joint	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop
8	Mira Loma	Food	Women's Store	Hot Dog Joint	Cosmetics Shop	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop
9	Moreno Valley	Mexican Restaurant	Fried Chicken Joint	Ice Cream Shop	Filipino Restaurant	Fast Food Restaurant	Bakery	Automotive Shop	Deli / Bodega	Asian Restaurant	Pizza Place

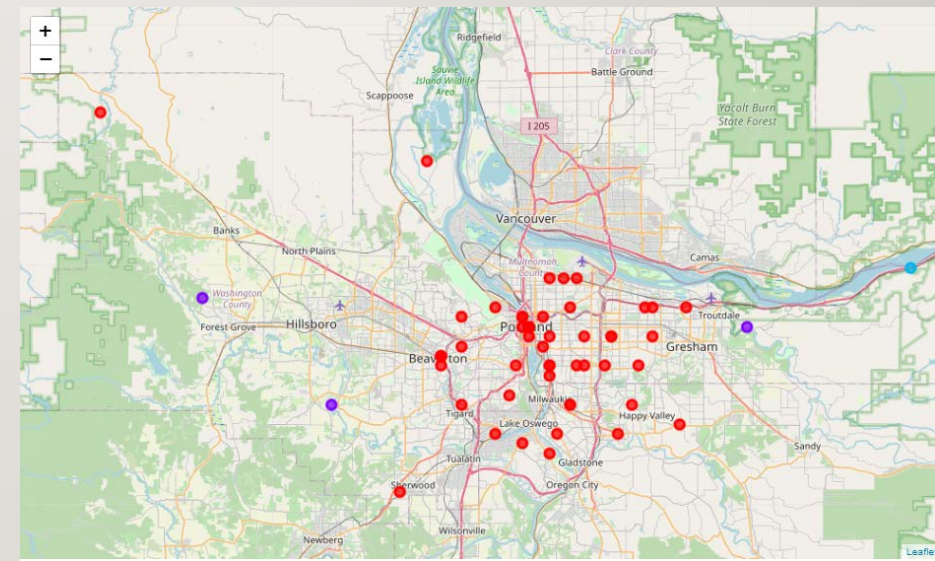
# RELOCATING WITH FOURSQUARE

## EVALUATING THE DATA (VENUE IDENTIFICATION ON MAP)

### TEMECULA, CA



### PORTLAND, OR





# RELOCATING WITH FOURSQUARE

## EVALUATING THE DATA (VENUE IDENTIFICATION TABLE FOR FOOD)

### TEMECULA, CA

Cluster Labels	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	latitude	lon
3	3.0	Homeland	Home Service	Hot Dog Joint	Cosmetics Shop	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop	Farmers Market	33.75
4	4.0	Idyllwild	Spa	Women's Store	Fried Chicken Joint	Cosmetics Shop	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop	33.76
5	1.0	Lake Elsinore	Sandwich Place	Fast Food Restaurant	Pizza Place	Fried Chicken Joint	Convenience Store	Bar	Latin American Restaurant	Cajun / Creole Restaurant	Food	Discount Store	33.68
5	1.0	Lake Elsinore	Sandwich Place	Fast Food Restaurant	Pizza Place	Fried Chicken Joint	Convenience Store	Bar	Latin American Restaurant	Cajun / Creole Restaurant	Food	Discount Store	33.60
5	1.0	Lake Elsinore	Sandwich Place	Fast Food Restaurant	Pizza Place	Fried Chicken Joint	Convenience Store	Bar	Latin American Restaurant	Cajun / Creole Restaurant	Food	Discount Store	33.71
6	1.0	March Air Reserve Base	Coffee Shop	Fast Food Restaurant	Women's Store	Convenience Store	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop	33.89
8	0.0	Mira Loma	Food	Women's Store	Hot Dog Joint	Cosmetics Shop	Deli / Bodega	Department Store	Dessert Shop	Diner	Discount Store	Donut Shop	33.99
9	1.0	Moreno Valley	Mexican Restaurant	Fried Chicken Joint	Ice Cream Shop	Filipino Restaurant	Fast Food Restaurant	Bakery	Automotive Shop	Deli / Bodega	Asian Restaurant	Pizza Place	33.87
9	1.0	Moreno Valley	Mexican Restaurant	Fried Chicken Joint	Ice Cream Shop	Filipino Restaurant	Fast Food Restaurant	Bakery	Automotive Shop	Deli / Bodega	Asian Restaurant	Pizza Place	33.92
9	1.0	Moreno Valley	Mexican Restaurant	Fried Chicken Joint	Ice Cream Shop	Filipino Restaurant	Fast Food Restaurant	Bakery	Automotive Shop	Deli / Bodega	Asian Restaurant	Pizza Place	33.92
9	1.0	Moreno Valley	Mexican Restaurant	Fried Chicken Joint	Ice Cream Shop	Filipino Restaurant	Fast Food Restaurant	Bakery	Automotive Shop	Deli / Bodega	Asian Restaurant	Pizza Place	33.91

### PORTLAND, OR

	Cluster Labels	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	latitude	
	2	0.0	Beaverton	Korean Restaurant	Coffee Shop	Sandwich Place	Mexican Restaurant	Grocery Store	Bakery	Wings Joint	Chinese Restaurant	Sushi Restaurant	Middle Eastern Restaurant	45.49
	2	0.0	Beaverton	Korean Restaurant	Coffee Shop	Sandwich Place	Mexican Restaurant	Grocery Store	Bakery	Wings Joint	Chinese Restaurant	Sushi Restaurant	Middle Eastern Restaurant	45.49
	2	0.0	Beaverton	Korean Restaurant	Coffee Shop	Sandwich Place	Mexican Restaurant	Grocery Store	Bakery	Wings Joint	Chinese Restaurant	Sushi Restaurant	Middle Eastern Restaurant	45.49
	2	0.0	Beaverton	Korean Restaurant	Coffee Shop	Sandwich Place	Mexican Restaurant	Grocery Store	Bakery	Wings Joint	Chinese Restaurant	Sushi Restaurant	Middle Eastern Restaurant	45.48
	3	2.0	Bridal Veil	American Restaurant	Yoga Studio	Eastern European Restaurant	Forest	Food Truck	Food Court	Food	Fondue Restaurant	Flower Shop	Fish & Chips Shop	45.58
	5	0.0	Cannon Beach	American Restaurant	Restaurant	Toy / Game Store	Art Gallery	Bakery	Café	Furniture / Home Store	Candy Store	Seafood Restaurant	Pizza Place	45.90
	18	0.0	Marylhurst	Chinese Restaurant	Ramen Restaurant	Martial Arts Dojo	Optical Shop	Mexican Restaurant	Coffee Shop	Grocery Store	Gym	Sandwich Place	Japanese Restaurant	45.39
	19	2.0	Mehama	Deli / Bodega	American Restaurant	Yoga Studio	Electronics Store	Forest	Food Truck	Food Court	Food	Fondue Restaurant	Flower Shop	44.79

# RELOCATING WITH FOURSQUARE

## EVALUATING THE DATA (VENUE IDENTIFICATION TABLE FOR CULTURE)

NOTE: TEMECULA WON THE TOSS FOR FOOD, SO WE ONLY EVALUATED THEM IN CULTURE

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
1	Banning	33.95	-116.83	Malki Museum	33.949280	-116.825279	Museum
7	Riverside	33.98	-117.37	Riverside Art Museum (RAM)	33.981682	-117.370581	Art Museum
17	Riverside	33.98	-117.37	UCR California Museum Of Photography	33.981360	-117.374530	Art Museum
28	Riverside	33.98	-117.37	Riverside Metropolitan Museum	33.982215	-117.372374	Museum
320	Temecula	33.50	-117.15	Temecula Valley Museum	33.497441	-117.150993	History Museum
3	Riverside	33.98	-117.37	Riverside Municipal Auditorium	33.982062	-117.370789	Performing Arts Venue
13	Riverside	33.98	-117.37	Riverside Life And Arts Center	33.981170	-117.371643	Performing Arts Venue
33	Riverside	33.98	-117.37	Culver Center of the Arts	33.981375	-117.374569	Performing Arts Venue

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FINAL DECISION: **RIVERSIDE, CA** (JUST OUTSIDE OF TEMECULA, CA)

