

# **COURSERA CAPSTONE PROJECT**

## **Battle of the Neighborhoods**

By Yvette Janecek

2019

### **Section Alpha: Introduction**

Description of Problem:

A couple has decided to relocate within the United States. They have created a list of requirements. This list includes a population range of under 75,000 and a few community amenities, such as a grocery store, a library, a post office, a gym or outdoor recreation, and restaurants. I am tasked with determining the cities and towns which fall within this desirable range.

### **Section Beta: Data**

Data will be acquired from the U.S. Census Bureau to identify communities within the desired population range. These metropolitan and micropolitan areas will then be passed through the Google Maps API in order to geocode each location by latitude and longitude. Along the way, any missing data will be removed. These coordinates will then be used in the Foursquare API, along with the venue categories selected by the couple, in order to acquire information regarding community amenities for each location. Lastly, these will be mapped to aid in visualization.

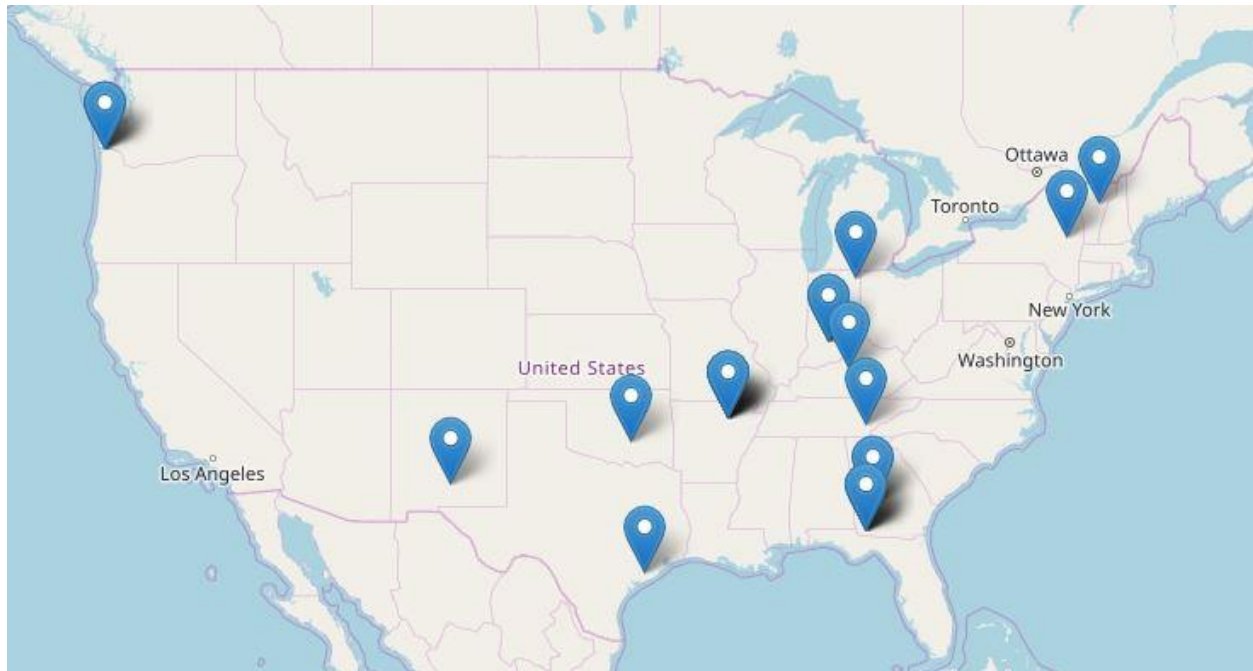
(This product uses the Census Bureau Data API but is not endorsed or certified by the Census Bureau.)

### **Section Gamma: Methodology**

Data from the U.S. Census Bureau was initially loaded using Census Bureau Data API. This data included all metropolitan and micropolitan areas and their population information from 2018. This data was cleaned then reduced to areas with a population less than or equal to 75,000. The metropolitan and micropolitan areas, or cities, were passed through the Google Maps API in order to acquire latitude and longitude for each city. Once this was done, the latitude and longitude coordinates were passed through the Foursquare API along with the categories IDs identified by the couple as significant.

## Section Delta: Results

The resulting data shows 226 locations which are home to one or more amenities requested by the couple, and thus, are locations of interest to the couple. These locations have been organized to show the cities with the most amenities first. The top twenty-five locations are mapped below.



## Section Epsilon: Discussion

The data has been organized to include cities and towns with a population range of under 75,000 and with the amenities, of a grocery store, a library, a post office, a gym or outdoor recreation, and restaurants. The top twenty-five cities and towns which fall within this desirable range are shown below.

	City	State	Latitude	Longitude	Venue	Category
0	Ada	OK	34.774531	-96.678345	House of Health	Food
1	Alamogordo	NM	32.899532	-105.960265	Roswell Baking Co	Bakery
2	Americus	GA	32.072386	-84.232688	Terri's Market and Eatery	Food

	<b>City</b>	<b>State</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Venue</b>	<b>Category</b>
<b>3</b>	Americus	GA	32.072386	-84.232688	J J's Wings & Things	Burger Joint
<b>4</b>	Amsterdam	NY	42.937745	-74.190356	Riverside Pizza	Pizza Place
<b>5</b>	Astoria	OR	46.187884	-123.831253	Midpoint	BBQ Joint
<b>6</b>	Astoria	OR	46.187884	-123.831253	Yufka	Burrito Place
<b>7</b>	Astoria	OR	46.187884	-123.831253	Warteg Niki II	Indonesian Restaurant
<b>8</b>	Athens	TN	35.442851	-84.592990	Dairy Barn	Ice Cream Shop
<b>9</b>	Auburn	IN	41.366994	-85.058858	Spencerville Easter Star Donut Stand	Donut Shop
<b>10</b>	Decatur County	GA	30.903800	-84.575470	Makan	Asian Restaurant
<b>11</b>	Bainbridge	GA	30.903800	-84.575470	Yuki Express Japanese Restaurant	Japanese Restaurant
<b>12</b>	Decatur County	GA	30.903800	-84.575470	Southern Sweets Bakery	Bakery
<b>13</b>	Decatur County	GA	30.903800	-84.575470	Perhaps A Wrap?	Food Truck
<b>14</b>	Bardstown	KY	37.809228	-85.466902	Harrison-Smith House	Comfort Food Restaurant
<b>15</b>	Barre	VT	44.197006	-72.502049	Green Mountain Mini Baked	Donut Shop
<b>16</b>	Batesville	AR	35.769799	-91.640972	Subway	Sandwich Place

	City	State	Latitude	Longitude	Venue	Category
17	Batesville	AR	35.769799	-91.640972	Subway	Sandwich Place
18	Batesville	AR	35.769799	-91.640972	Fat Jax Catering and Carry Out	Food
19	Batesville	AR	35.769799	-91.640972	Morningside Coffee House	Food
20	Batesville	AR	35.769799	-91.640972	Sabor Latino	Food Truck
21	Bay City	TX	28.982757	-95.969402	Marias Mexican Restaurant	Mexican Restaurant
22	Bedford	IN	38.861162	-86.487215	Country Barn Cafe (early bird)	American Restaurant
23	Bedford	IN	38.861162	-86.487215	El Nacho Del Burrito Mexican Grill	Burrito Place
24	Bedford	IN	38.861162	-86.487215	Long John Silver's	Seafood Restaurant

### Section Zeta: Conclusion

In conclusion, the couple has several options for relocation, which addresses their needs. They should be able to find a new place to live. I wish them the best.