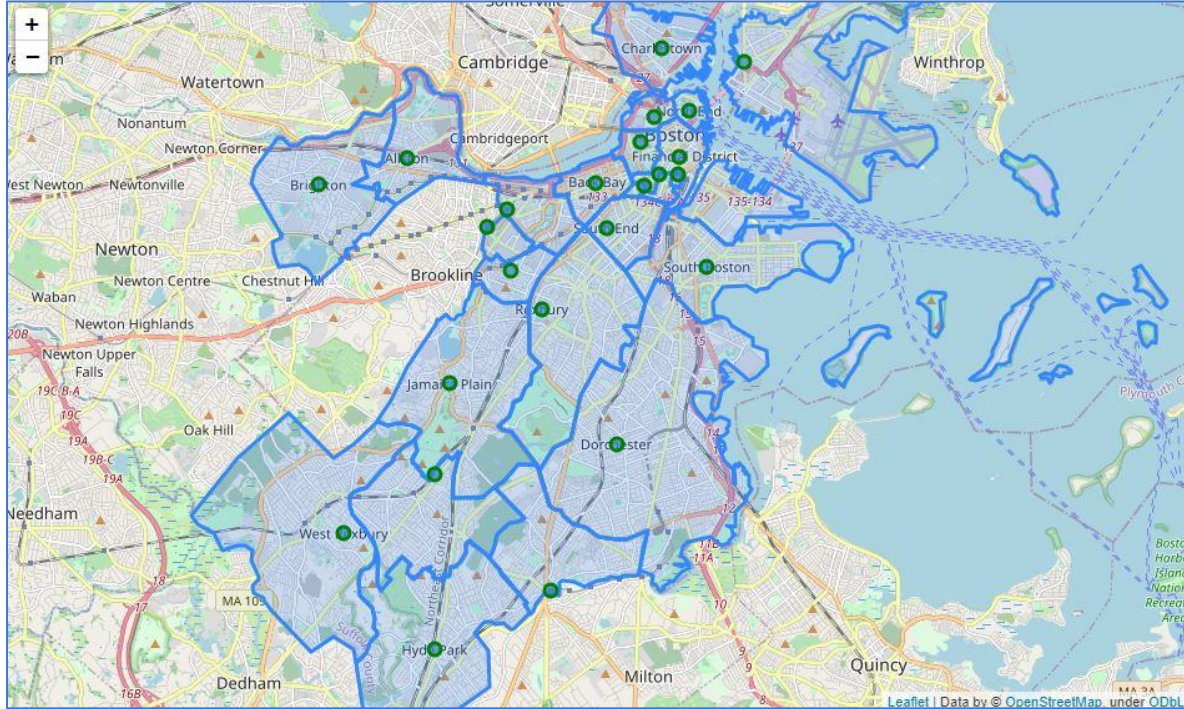




# Battle of the Neighborhoods

## East Meets West

# Boston Neighborhoods Of Interest

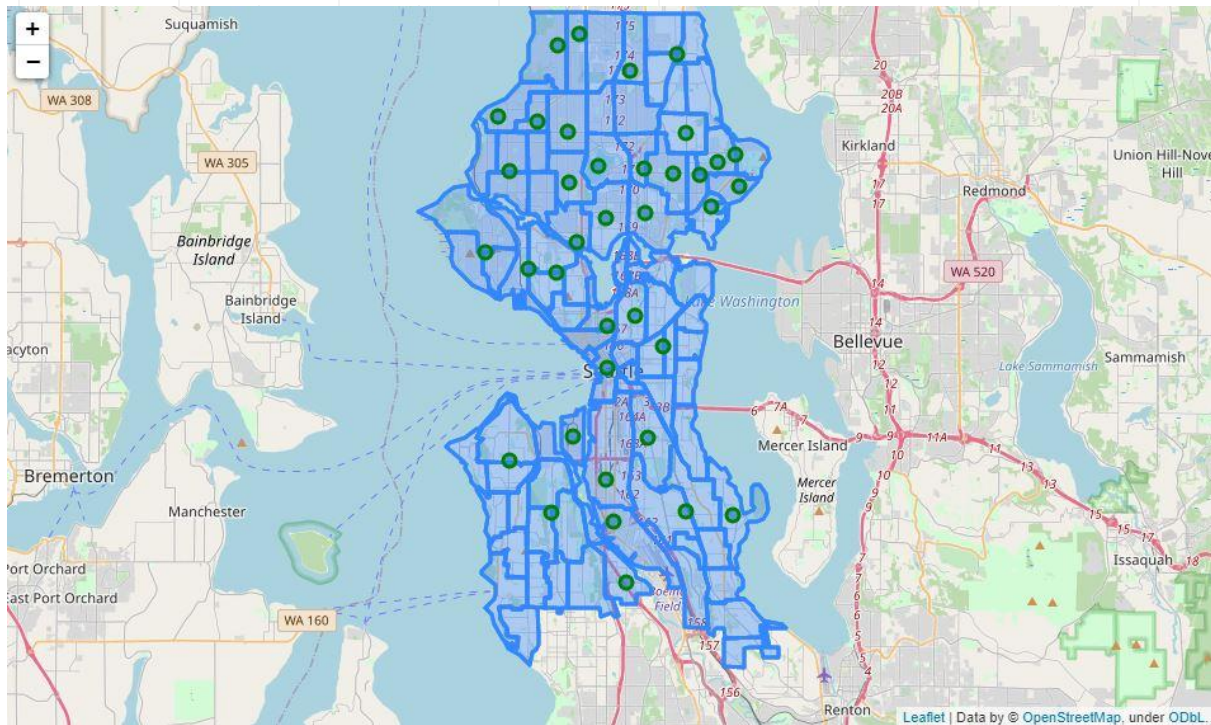


Population: 684,379

Area: 89.63 mi<sup>2</sup>

Number of Neighborhoods: 26

# Seattle Neighborhoods of Interest



Population: 724,305

Area: 83.78 mi<sup>2</sup>

Number of Neighborhoods: 36

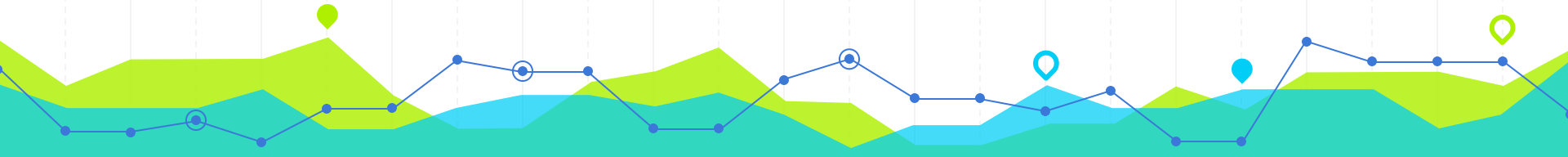
## Project Objective

### Individual City Analysis

Cluster each city's neighborhoods according to venue types and analyze the structure of the resulting clusters.

### Combined City Analysis

Pool both cities neighborhood venue data and form clusters using the neighborhoods of both cities, and then analyze the results.



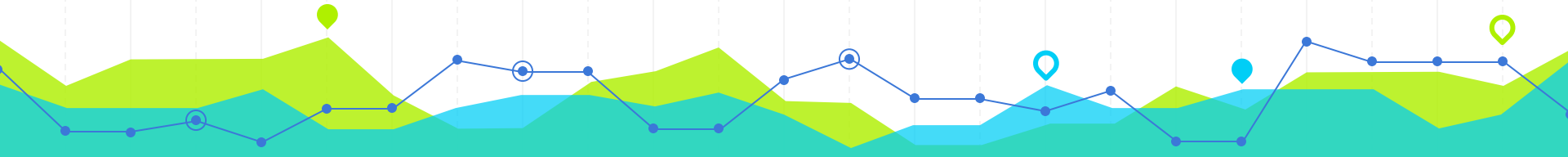
## Potential Target Audience

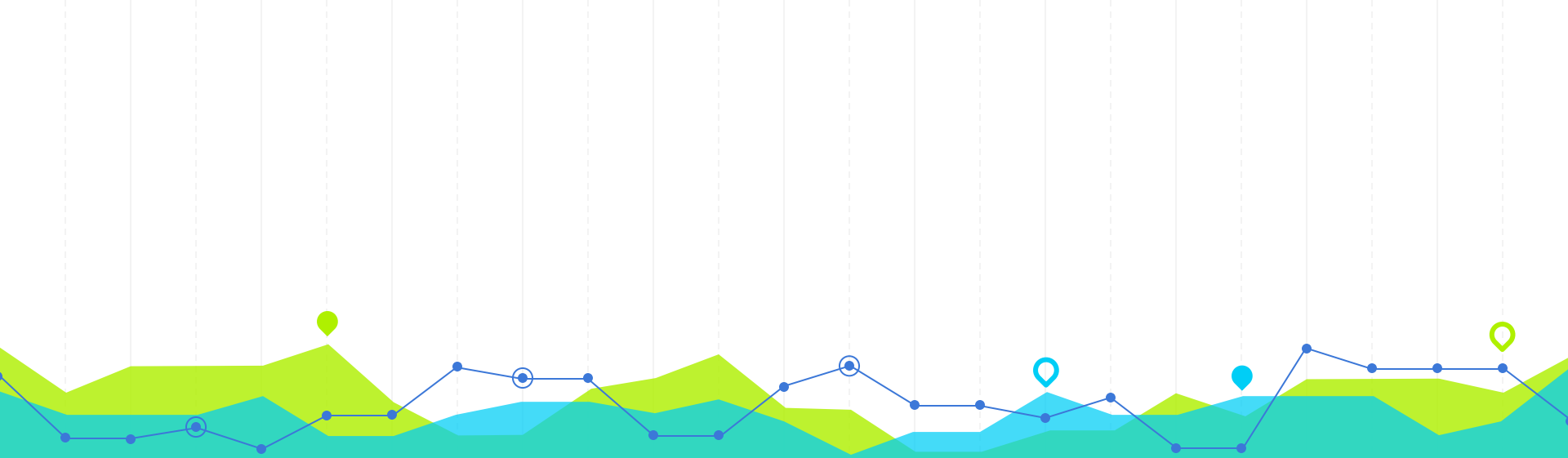
### Business Owners

Business owners looking to expand to other neighborhoods and the pre-existing neighborhood venues may have an effect on their business

### Travel Recommenders

Travel Websites and travel recommenders (such as advertisers) may be interested in finding out what neighborhoods they can recommend based on someone's travel history.

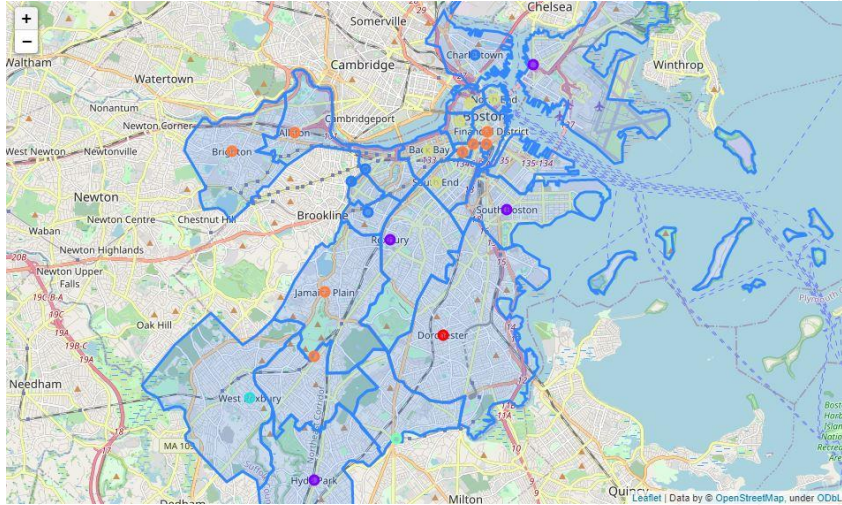




**Individual Analysis of Each  
City's Neighborhoods**



# Boston Individual Analysis



- Cluster 0
- Cluster 1
- Cluster 2
- Cluster 3
- Cluster 4
- Cluster 5
- Cluster 6

Cluster 1 has 4 neighborhoods

	Venue Type	Number of Occurrences	Percentage
24	Sandwich Place	3.0	0.75
22	Pizza Place	3.0	0.75
20	Park	3.0	0.75
15	Italian Restaurant	3.0	0.75
14	Gym	2.0	0.50
7	Convenience Store	2.0	0.50
1	Art Gallery	2.0	0.50
16	Latin American Restaurant	1.0	0.25
27	Supermarket	1.0	0.25
26	Storage Facility	1.0	0.25

Cluster 2 has 4 neighborhoods

	Venue Type	Number of Occurrences	Percentage
3	Café	4.0	1.00
5	Coffee Shop	4.0	1.00
7	Donut Shop	4.0	1.00
19	Park	4.0	1.00
21	Pizza Place	2.0	0.50
0	American Restaurant	1.0	0.25
15	Lounge	1.0	0.25
25	Sushi Restaurant	1.0	0.25
24	Sports Bar	1.0	0.25
23	Sandwich Place	1.0	0.25

Cluster 5 has 5 neighborhoods

	Venue Type	Number of Occurrences	Percentage
5	Coffee Shop	5.0	1.0
14	Italian Restaurant	5.0	1.0
0	American Restaurant	4.0	0.8
12	Hotel	4.0	0.8
17	Park	4.0	0.8
23	Seafood Restaurant	3.0	0.6
21	Sandwich Place	2.0	0.4
9	French Restaurant	2.0	0.4
19	Pizza Place	2.0	0.4
1	Bakery	2.0	0.4

Cluster 6 has 8 neighborhoods

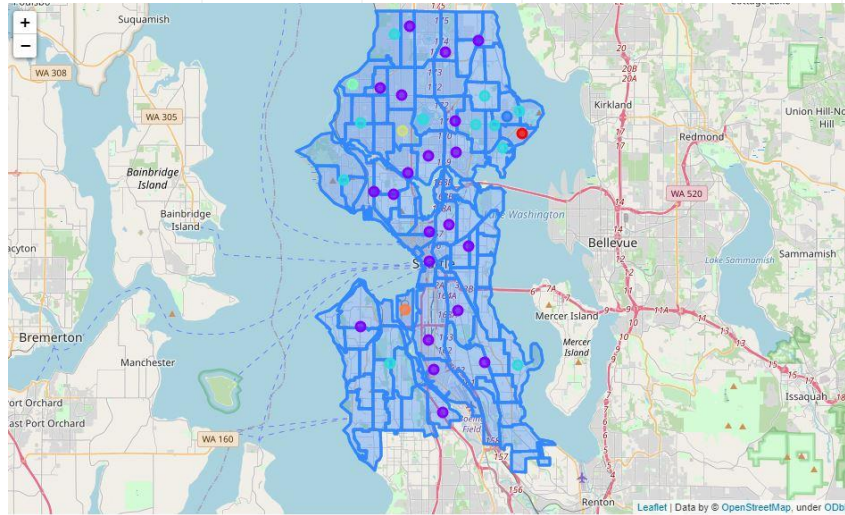
	Venue Type	Number of Occurrences	Percentage
4	Bakery	8.0	1.000
11	Coffee Shop	8.0	1.000
10	Chinese Restaurant	6.0	0.750
29	Sandwich Place	5.0	0.625
24	Pizza Place	4.0	0.500
3	Asian Restaurant	4.0	0.500
17	Hotel	4.0	0.500
32	Sushi Restaurant	4.0	0.500
22	Park	3.0	0.375
23	Performing Arts Venue	3.0	0.375

Cluster 1: Carb workout  
Cluster 2: A Casual Snack

Cluster 5: A stroll downtown  
Cluster 6: Foodie towns



# Seattle Individual Analysis



- Cluster 0
- Cluster 1
- Cluster 2
- Cluster 3
- Cluster 4
- Cluster 5
- Cluster 6

Cluster 1 has 21 neighborhoods

	Venue Type	Number of Occurrences	Percentage
21	Coffee Shop	17.0	0.809524
55	Pizza Place	11.0	0.523810
8	Bar	11.0	0.523810
12	Brewery	8.0	0.380952
17	Café	8.0	0.380952
40	Grocery Store	7.0	0.333333
75	Thai Restaurant	7.0	0.333333
52	Park	6.0	0.285714
57	Pub	6.0	0.285714
6	Bakery	6.0	0.285714

Cluster 3 has 11 neighborhoods

	Venue Type	Number of Occurrences	Percentage
46	Park	11.0	1.000000
61	Trail	5.0	0.454545
17	Coffee Shop	4.0	0.363636
62	Video Store	3.0	0.272727
4	Bank	3.0	0.272727
33	Grocery Store	3.0	0.272727
59	Thai Restaurant	3.0	0.272727
28	Food Truck	3.0	0.272727
14	Café	3.0	0.272727
48	Pharmacy	2.0	0.181818

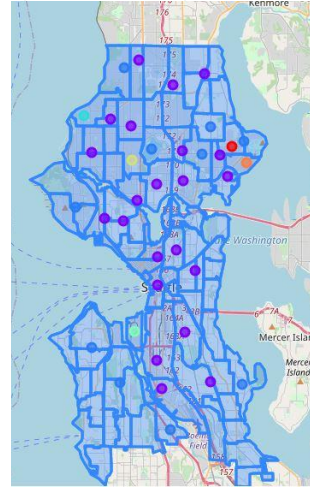
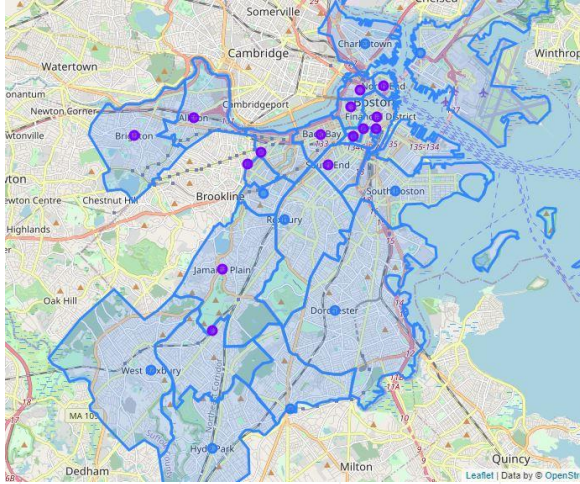
Cluster 1: Lots of venues to get a drink  
Cluster 3: The great outdoors





# Analysis of Combined City Neighborhoods

# Combined Analysis



Cluster 1 has 37 neighborhoods  
 Percentage of Boston Neighborhoods in this cluster: 40.54%  
 Percentage of Seattle Neighborhoods in this cluster: 59.46%

	Venue Type	Number of Occurrences	Percentage
24	Coffee Shop	33.0	0.891892
7	Bakery	19.0	0.513514
84	Pizza Place	16.0	0.432432
80	Park	16.0	0.432432
9	Bar	13.0	0.351351
58	Hotel	13.0	0.351351
105	Thai Restaurant	11.0	0.297297
93	Sandwich Place	10.0	0.270270
21	Chinese Restaurant	9.0	0.243243
19	Café	9.0	0.243243

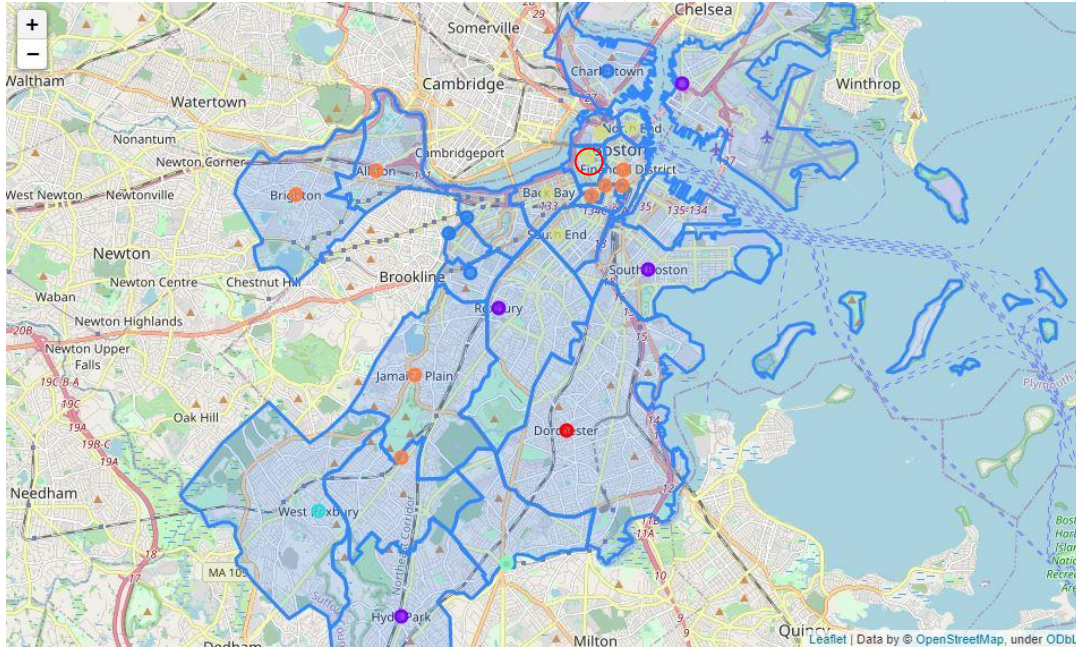
Cluster 2 has 19 neighborhoods  
 Percentage of Boston Neighborhoods in this cluster: 47.37%  
 Percentage of Seattle Neighborhoods in this cluster: 52.63%

	Venue Type	Number of Occurrences	Percentage
61	Park	15.0	0.789474
65	Pizza Place	9.0	0.473684
22	Donut Shop	7.0	0.368421
41	Gym	7.0	0.368421
19	Coffee Shop	7.0	0.368421
72	Sandwich Place	6.0	0.315789
45	Italian Restaurant	6.0	0.315789
40	Grocery Store	5.0	0.263158
17	Café	5.0	0.263158
88	Trail	4.0	0.210526

- Cluster 0
- Cluster 1
- Cluster 2
- Cluster 3
- Cluster 4
- Cluster 5
- Cluster 6

Cluster 1: Eateries galore  
 Cluster 2: A well rounded neighborhood

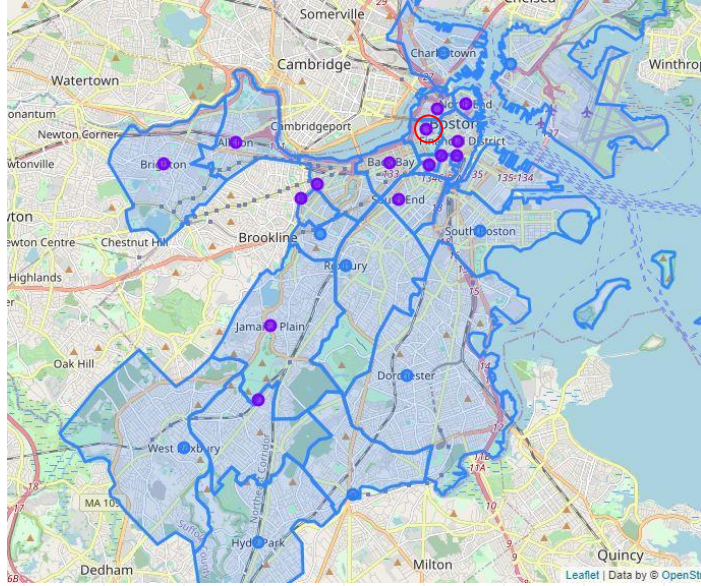
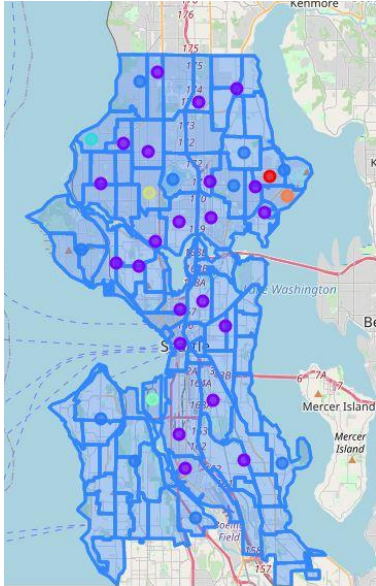
# Practical Application to Target Audience



- Suppose a coffee shop owner in Beacon Hill, Boston (circled in red) wishes to expand to another location in Boston
- Beacon Hill is in cluster 5 (yellowish green), whose neighborhoods already have a high occurrence of coffee shops
- The owner should look at neighborhoods in cluster 1 (purple), where there will be least competition for his business



# Practical Application to Target Audience



- Suppose a traveler has visited Beacon Hill, Boston(circled in red) and had a pleasant visit there
- A travel recommender sees that Beacon Hill which is in cluster 1 (purple), has been visited and the traveler had a positive experience there
- The travel recommender can push other Boston neighborhoods in cluster 1 as recommendations
- Or if the traveler has expressed interest in Seattle, recommend cluster 1 neighborhoods in Seattle as well