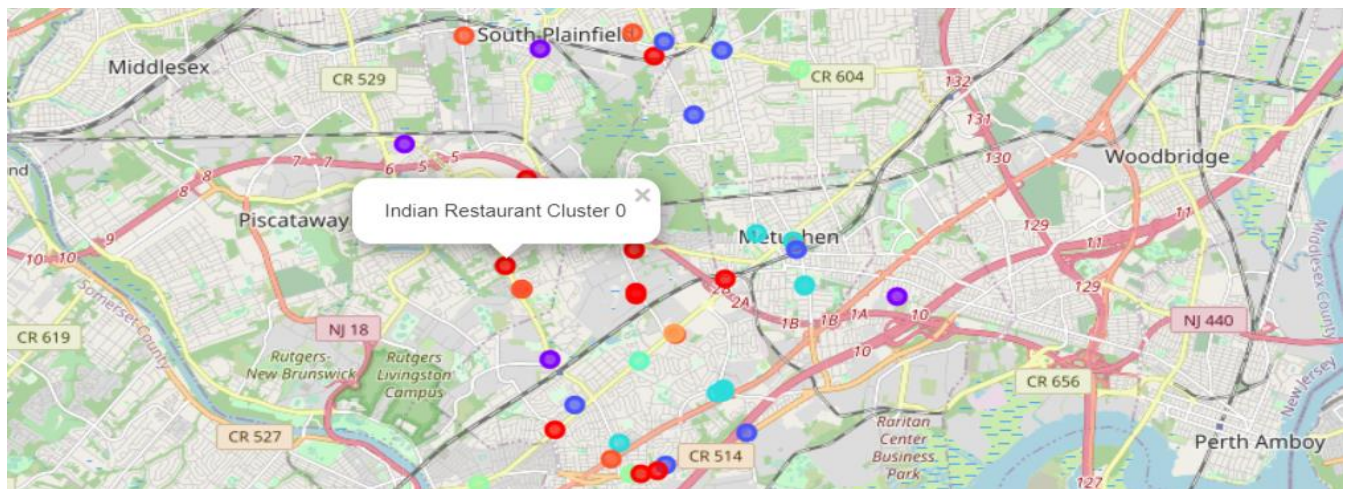


Final Report

GOAL:

- To analyses the Edison township in NJ state and identify the best restaurant type that can be opened.
- To recommend the alternative option as well



CLUSTER EDISON CENTERS' RESTAURANT

CANDIDATE LOCATION

RESTAURANT TYPES AT EDISON CENTER

- There are a lot of different restaurants in Edison.
- Maybe there is different character at each area
- Analyze the cluster character can help the stake holders: location
- Cluster and restaurant type
- Cluster the candidate location for helping operation team:
- Analyze the current restaurant type
- Cluster the different restaurant type in each cluster

DATA ACQUISITION AND CLEANING

Foursquare API:

- Get the restaurants information by using Foursquare API

Government Site:

- Get demographic data from NJ govt site

Data flow:

- Get the Edison geometry information
- Count categorized restaurants
- Normalize the data

Restaurant Categories

[36]:

	categories	lat	lng	distance
0	Asian Restaurant	40.544740	-74.392365	3744.00
1	Brazilian Restaurant	40.586483	-74.418775	5749.00
2	Breakfast Spot	40.479919	-74.409005	6606.00
3	Business Service	40.553336	-74.417479	2568.00
4	Chinese Restaurant	40.539805	-74.394199	3336.25
5	Dim Sum Restaurant	40.521146	-74.394329	1902.00
6	Diner	40.561309	-74.396229	4088.00
7	Food	40.524083	-74.399204	2339.40
8	Food Court	40.516119	-74.376708	2886.00
9	Halal Restaurant	40.532657	-74.340746	4591.00
10	Health Food Store	40.550799	-74.434912	3692.00
11	Hookah Bar	40.526008	-74.386992	1502.00
12	Indian Restaurant	40.536280	-74.398696	2341.40
13	Italian Restaurant	40.526992	-74.373081	2908.00
14	Kitchen Supply Store	40.546399	-74.421748	2476.00
15	Latin American Restaurant	40.500952	-74.395855	4152.00
16	Malay Restaurant	40.515459	-74.378143	2889.00

Clustered Labels

[41]:

Cluster Labels		categories
0	2	Asian Restaurant
1	7	Brazilian Restaurant
2	3	Breakfast Spot
3	0	Business Service
4	9	Chinese Restaurant
5	5	Dim Sum Restaurant
6	6	Diner
7	0	Food
8	4	Food Court
9	1	Halal Restaurant
10	2	Health Food Store
11	8	Hookah Bar
12	0	Indian Restaurant
13	4	Italian Restaurant
14	0	Kitchen Supply Store
15	6	Latin American Restaurant

Demographic Numbers

	Race	Population	Percent
0	White	59524	60.90%
1	African American	7190	7.74%
2	American Indian	476	0.50%
3	Asian	29474	30.20%
4	Hawaiian	117	0.01%

- White Americans populated at 60% of total population.
- Asians counts to 30% of population in Edison.