SETTING UP A NEW AFRICAN RESTAURANT IN A TORONTO NEIGHBORHOOD

Find the best neighborhood in Toronto for a new African restaurant

METHODOLOGY

two major factors are put to play that is:

1.commercially viable neighborhoods*¶

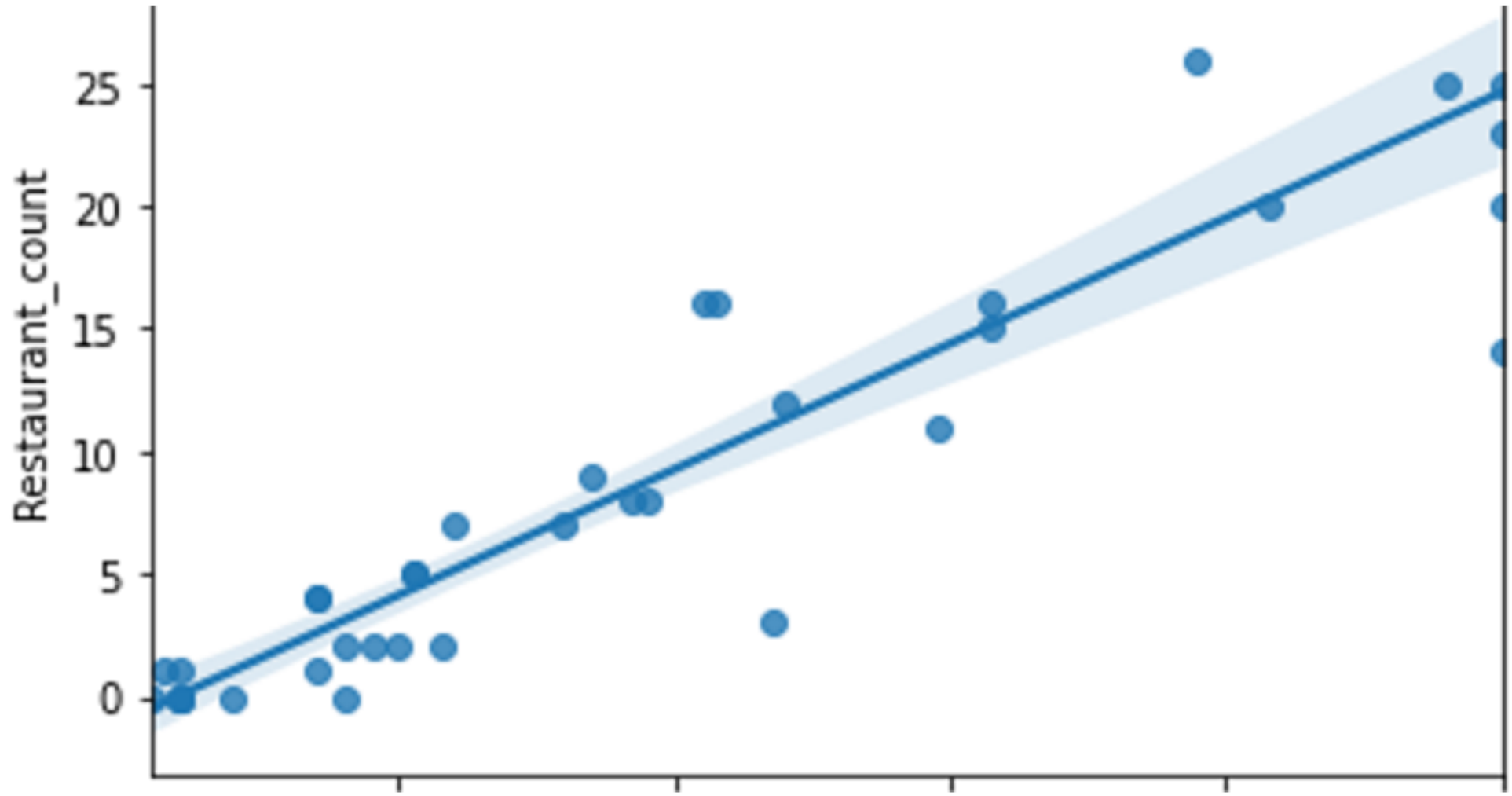
2.area with least competition in restaurant*

in this project with the data available and gathered by me,(four squared venue data) I intend use three models to determine the best location for a new African restaurant based on the two factor above

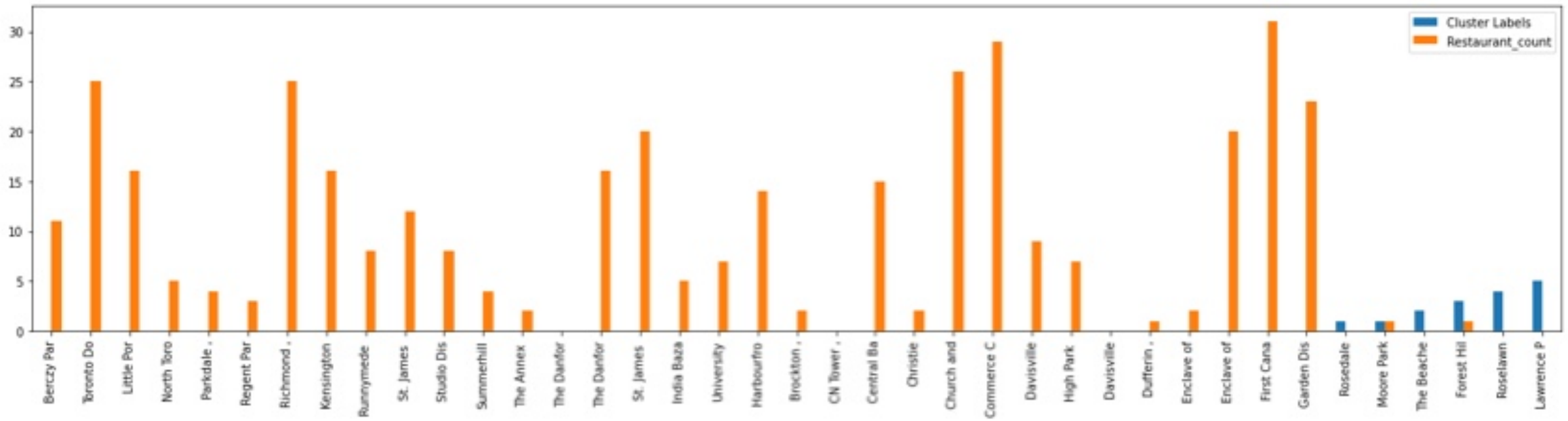
- **first to run a *Regression Model* to determine a relationship or correlation between thriving commercial hood and number of restaurants**
- **second cluster neighborhood together base on their venue setup similarities then**
- **Thirdly to combine the effects of the first two results there by creation a cluster of neighborhoods with commercial activities and similarity of venue**

all this done excluding the **Dependent y** *variable we know to be number of restaurants per Hood* so that we can evaluate our models accuracy testing how well it can predict our dependent variable: the number of restaurants the best model is found and used to get results

1. *Linear Regression: is there a correlation between no. venues and no. of restaurants. we will merge and plot to see on restaurants count and venue count per neighborhood*

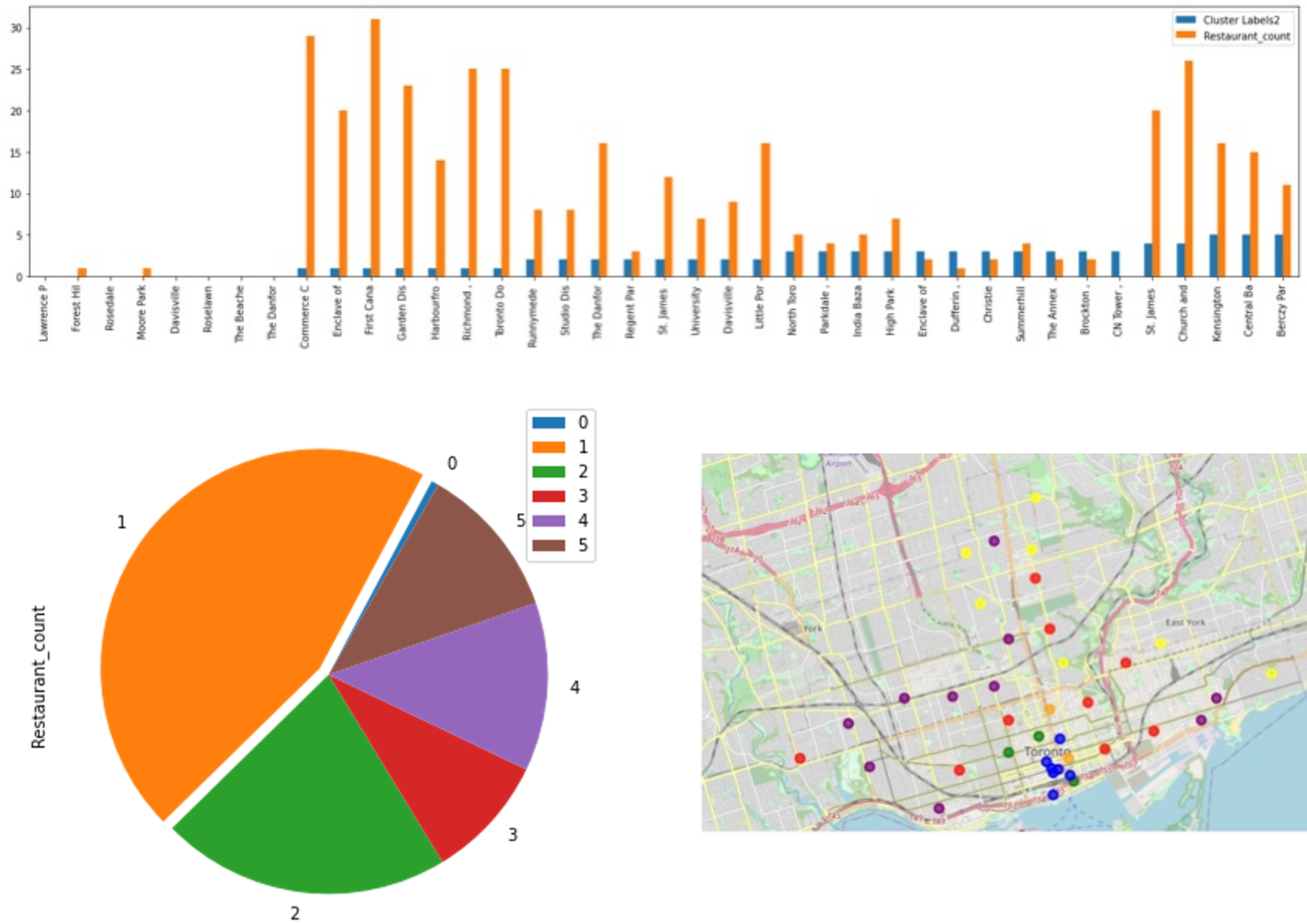


CLUSTERING to further analysis trends between Neighborhood Similarities and Number of Restaurants because restaurant y is our independent variable lets remove all 45 of it



	Neighborhood	Museum	Adult Boutique	Airport	Airport Food Court	Airport Gate	Airport Lounge	Airport Service	Airport Terminal	Antique Shop
0	Berczy Park	0.020833	0.0	0.0000	0.0000	0.0000	0.000	0.0000	0.000	
1	Brockton , Parkdale Village , Exhibition Place	0.000000	0.0	0.0000	0.0000	0.0000	0.000	0.0000	0.000	
2	CN Tower , King and Spadina , Railway Lands ...	0.000000	0.0	0.0625	0.0625	0.0625	0.125	0.1875	0.125	
3	Central Bay Street	0.000000	0.0	0.0000	0.0000	0.0000	0.000	0.0000	0.000	
4	Christie	0.000000	0.0	0.0000	0.0000	0.0000	0.000	0.0000	0.000	

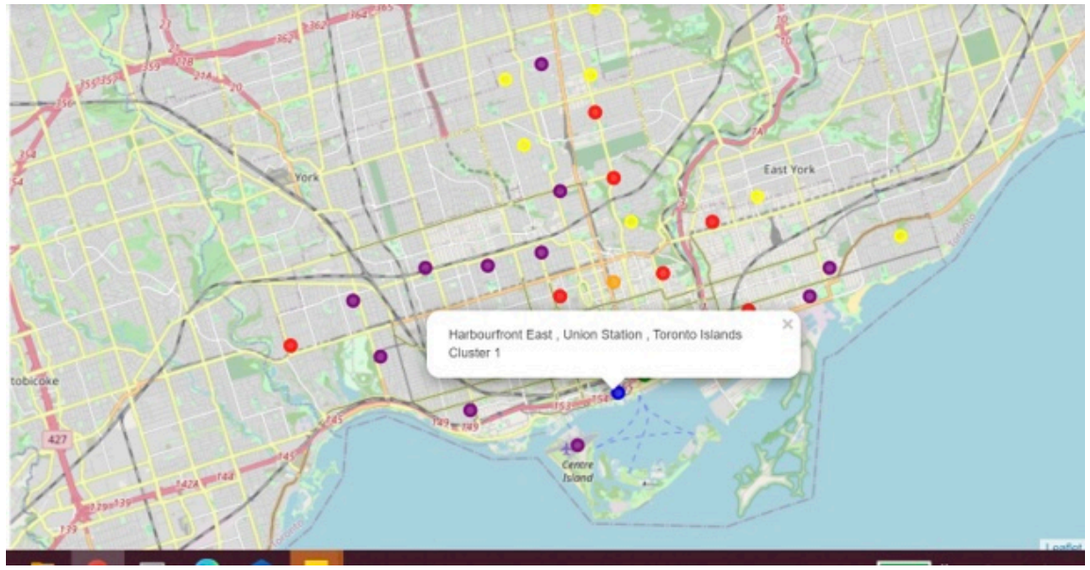
3 COMBINED_CLUSTER:
some trend is appearing, now what if we factor total number on venues like we found earlier to our clustering algorithm combine both neighborhood venue similarity and number total number of venues...
ultimately we can find that neighborhood out layer that need to have more restaurants to attain equilibrium too
Now out neighborhood are



RESULT AND DISCUSSION

interpreting data we can see that Harbourfront East and Enclave of M5E neighborhoods¶ are the most promising because they are not yet saturated with a many restaurants yet and a have the attributes of all the places with teaming Restaurants¶

	index	Neighborhood	Cluster Labels2	Restaurant_count	Venue
0	12	Harbourfront East , Union Station , Toronto ...	1	14.0	100
1	9	Enclave of M5E	1	20.0	100
2	11	Garden District, Ryerson	1	23.0	100



Thank you