Placement of Art Gallery for More Accessible Art and Artists

1 INTRODUCTION

The principle goal of this exercise is to inform the placement of an art gallery in New York City. Art galleries are common, but in conversation with several artists who live in NYC, I have learned several facts. First, the art gallery community is principally concerned with *value*, which is to say about how much a painting might sell for in the future. This has two effects. First, it raises an incredible barrier of entry, since after all an artist who has already sold is more likely to sell (and to re-sell in the future). It also tends to prevent people who want art in their homes from seeking it, as the gallery world is focused on selling high-end art (which most families cannot afford).

The goal, then, is to place a new art gallery focused on selling unknown artist's for cheaper prices. It would establish an upper end of price for each art piece, as well as not sell artists successful in other areas of the art businesses.

1.1 WHERE TO PLACE SUCH A GALLERY

Two criteria are important: location close to other entertainment/exercise/food. Incidental walk-ins are encouraged, i.e. people open to but not specifically searching for art. Second, distance away from other art galleries - since they attract a crowd that tends to look for other art.

2 THE DATA

The data will use the neighborhood data and a truncated body of the Foursquare data, i.e. excluding certain types of establishments (like churches, zoos, parks) which aren't associated with shopping or a "night-life" type entertainment we are focused on (even though "night life" is a bad describer. I've been to NYC on a weekend, they drink sun up to sun down). A complete listing will be described in the actual code notebook.

Using these data, first a simple K-means testing will be done to establish the type and amount of entertainment. I will use K=10, to allow greater division among the groups.

Using these means groups, the 3 "best" groups will be identified - i.e. a higher concentration of bars/restaurants. K means testing will then be repeated among these to identify the inclusion of other galleries. The "loser" of these will then be the best neighborhood to open the gallery - having a sufficiently high portion of other attracting businesses and being distant from those neighborhoods which would attract customers who might turn their nose up at "cheap" and "undiscovered" artists' work.

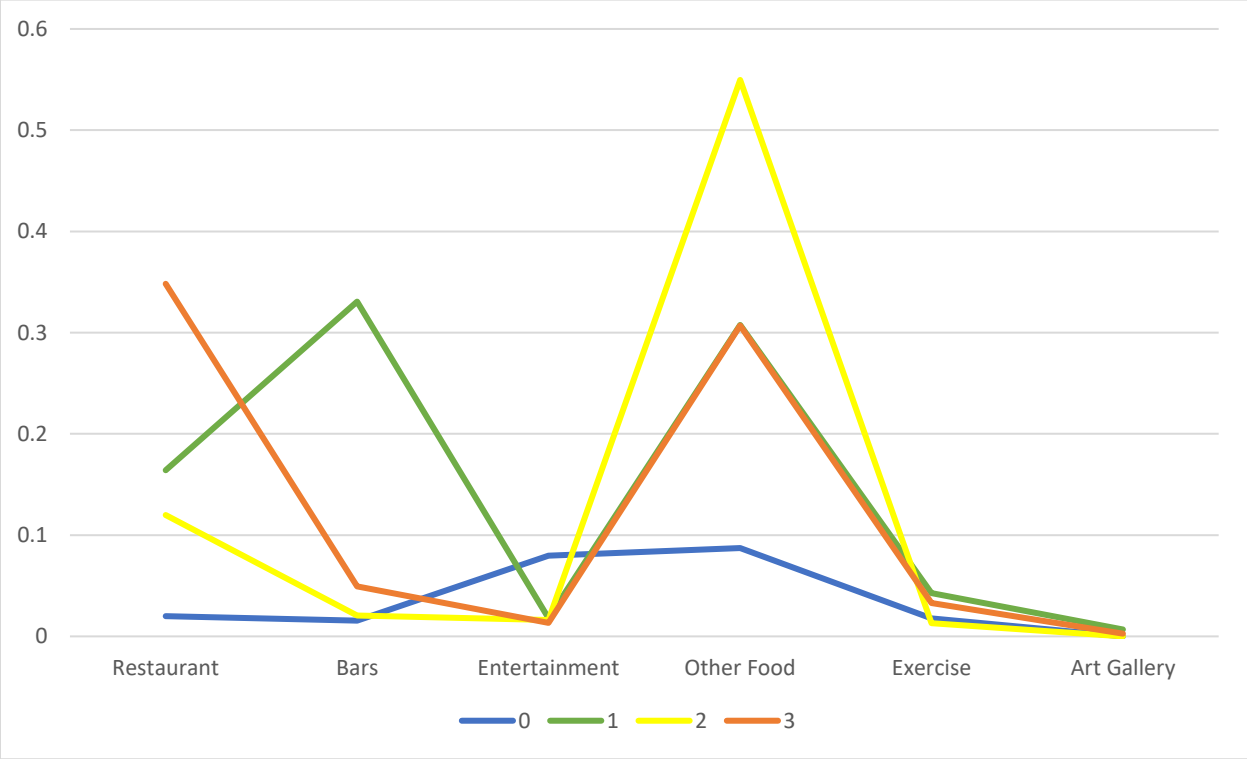
3 METHODS

After scraping and assigned lat/long data to the neighborhoods, the FourSquare data is extracted and attached. Data is grouped according to five categories: Restaurants, Bars, Entertainment, Other Food, and Exercise.

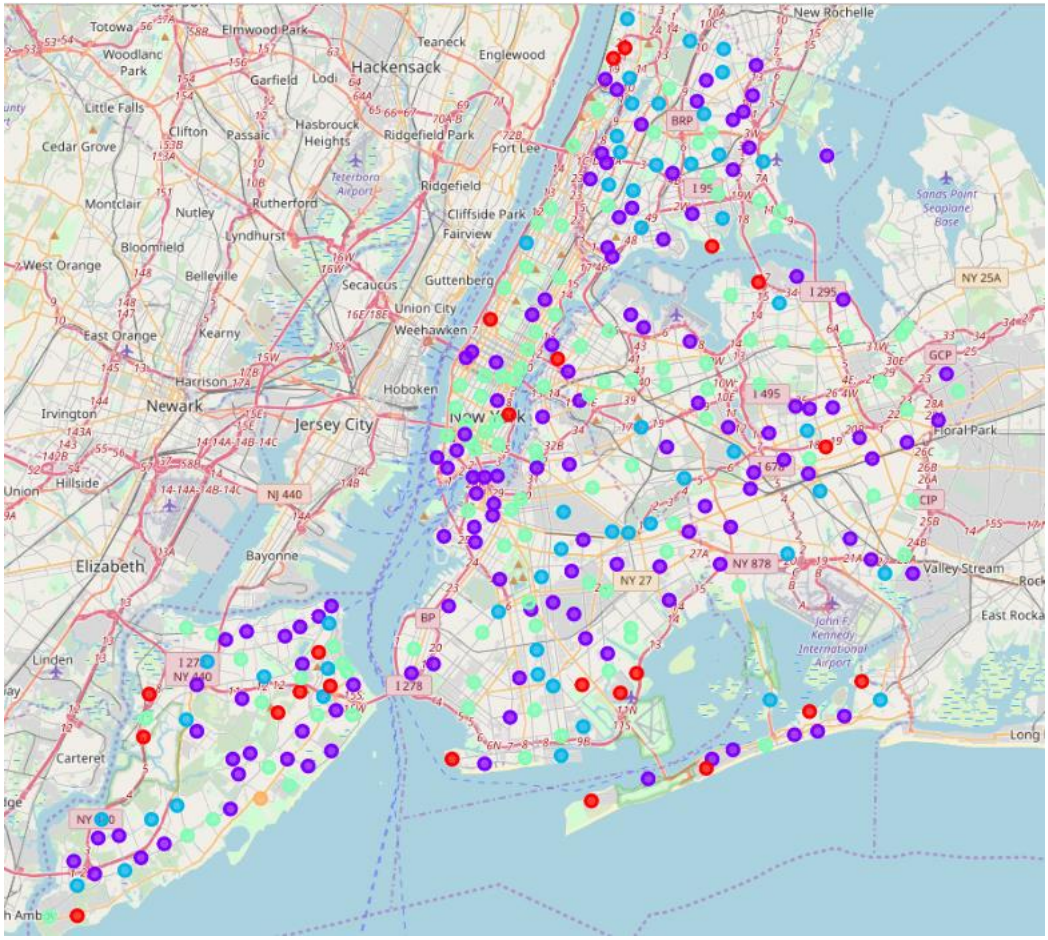
Restaurants are identified explicitly as such in the FourSquare data, as are Bars. Entertainment includes non-food options like bowling alleys, theaters, and arcades. Obviously, many of these places serve food, but we only have the category titles to go on. Other Food includes stores designed principally for unprepared or prepared foods which are intended to be eaten elsewhere (candy, grocery stores) and non-standard food establishments (e.g. food trucks). Other Food may also include vaguely titled establishments i.e. “taco place”, which most likely mean a restaurant, but certainly implies a less formal atmosphere. Finally, exercise includes gyms and sports fields for use by average people (no professional/college stadiums included).

The occurrence within these categories is summed, then the mean occurrence is found. This data is what the K means clustering, with K=5, is performed.

4 RESULTS



Cluster 4 is excluded form this figure. There were only bars present. Cluster 1 and 3 have similar “Other Food” venues, but are distinguished from one another by the number of Restaurants (Cluster 3 has more) or Bars (Cluster 1). Neither has as much “Other Food” as Cluster 2. Finally, Cluster 0 has Entertainment as a greater proportion of its total occurrences, but over all has fewer venues than other clusters



There is only slight bias in the geographical location of Clusters. There is certainly a group of 1 and 3's in lower Manhattan and the portion of Brooklyn immediately across from it. Cluster 2 is predominantly located either in the Bronx, on Staten Island, or in the southern ½ of Brooklyn and Queens. Cluster 0 has the least patterned distribution.

Trading in hearsay about New York City, it is not surprising that Cluster 2, the "other food" category, is more relegated to the Outer Boroughs, which are more residential that the lower Manhattan area.

Only Cluster 1 and 3 have art galleries: Cluster one has nearly 3 times (0.008) the occurrence as Cluster 3 (0.003).

5 DISCUSSION

As a screening exercise, this notebook and its results teach us three things. First, do not bother with Oakwood, the loan candidate for Cluster 4. Secondly, Cluster 1 and 3 would be better bets, with Cluster 3 being slightly better due to the lower amount of competitive attractions (i.e. other art galleries).

Given the poor geographical bias in the cluster membership, other considerations are likely to affect final placement of such a gallery (i.e. real estate cost, access to transportation, distance from residence,

actual physical neighbors). However, we have reason to believe that location outside of the main Lower Manhattan/Adjacent Brooklyn area can bring proximity to supportive attractions (i.e. social places like restaurants and bars).