

Tuning-In To NYC's Most Musical Neighborhoods

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Abstract

Machine learning allows for the creation of computational models capable of identifying patterns in multidimensional datasets. This project aims to leverage Foursquare location data and machine learning algorithms to identify the most musical neighborhoods in New York City.

Introduction

Background

Music is a form of art that has, and probably always will be, deeply embedded within the cultural activity of cities, communities, and groups of people more generally. Music is a means of communication, expression, and sometimes even protest with the power to peacefully bring together large amounts of like-minded people, influence popular culture, and hypnotize you with a memorable lyric that you end up singing in the shower subliminally for weeks on end even after consciously being disappointed in yourself for doing so.....I digress....

Problem

Cities are, in part, composed of musical entities such as record shops, instrument vendors, concert halls, amphitheaters, and more, that not only provide to the music needs of local citizens but also to tourists from around the world. For bigger cities, music entities can be spread apart, resulting in an ecosystem of hip niche neighborhoods that evolve and change over time. This ecosystem is often learned by humans looking for a cool music scene through either natural life experience (wandering/flaneur) or recommendations in the form of internet reviews, comments, and conversations with people in-real-life.

This project aims to quantify and monitor the state of neighborhoods in a major metropolitan city, New York City, and identify clusters of similar music scenes.

Interested Stakeholders

Different parties may be interested in a model that is able to quantify neighborhood similarity based on music venue frequency and thus group neighborhoods of similar music profiles. Such a model would be able to inform renters and home buyers who prefer to live where the music is happening that they're next home is properly located. Future music venue start-ups can utilize the model to identify neighborhoods lacking live music venues and ensure they are investing in an area that is not saturated. Future music retail vendors, sellers of things like records and instruments, can similarly utilize the model to ensure they are launching a business where competition is in their favor.

Methodology

Data Sources

NYU Spatial Data Repository

I am using the '2014 New York City Neighborhood Names' dataset hosted by NYU's Spatial Data Repository as the basis for the neighborhood names and associated location centroids [0]. The image to the right shows a sample of this information:

| | Borough | Neighborhood | Latitude | Longitude |
|---|---------|--------------|-----------|------------|
| 0 | Bronx | Wakefield | 40.894705 | -73.847201 |
| 1 | Bronx | Co-op City | 40.874294 | -73.829939 |
| 2 | Bronx | Eastchester | 40.887556 | -73.827806 |
| 3 | Bronx | Fieldston | 40.895437 | -73.905643 |
| 4 | Bronx | Riverdale | 40.890834 | -73.912585 |

Foursquare - 'Places API'

I will be using Foursquare's 'Places API' to acquire data related to 'venues' (as defined by Foursquare) categorized to be somehow associated with music [1]. It is important to note that Foursquare defines a 'venue' as a place that one can go to, or check-in to, and that a 'venue' is not necessarily a music venue but can be any establishment such as a restaurant or type of retail shop. Each Foursquare 'venue' is assigned a 'category' and each 'category' is associated with a particular 'categoryID'. The image to the right shows the 'categoryID' values provided by Foursquare that will be used to acquire music related venues within New York City:

Foursquare Music-Related Venue CategoryIDs

```
Music Venue = '4bf58dd8d48988d1e5931735'
Jazz Club = '4bf58dd8d48988d1e7931735'
Piano Bar = '4bf58dd8d48988d1e8931735'
Rock Club = '4bf58dd8d48988d1e9931735'
Concert Hall = '5032792091d4c4b30a586d5c'
Amphitheater = '56aa371be4b08b9a8d5734db'
Music Festival = '5267e4d9e4b0ec79466e48d1'
Nightlife Spot = '4d4b7105d754a06376d81259'
Music Store = '4bf58dd8d48988d1fe941735'
Record Shop = '4bf58dd8d48988d10d951735'
Recording Studio = '52f2ab2ebc57f1066b8b37'
```

Data Retrieval

Neighborhood Name & Location Centroid Data

The ‘2014 New York City Neighborhood Names’ dataset hosted by NYU’s Spatial Data Repository was easy to download as a JSON file and import into a Jupyter Notebook:

```
with open('newyork_data.json') as json_data:
    newyork_data = json.load(json_data)
nyc_neighborhood_data = newyork_data['features']
nyc_neighborhood_data[0]

{'type': 'Feature',
 'id': 'nyu_2451_34572.1',
 'geometry': {'type': 'Point',
 'coordinates': [-73.84720052054902, 40.89470517661]},
 'geometry_name': 'geom',
 'properties': {'name': 'Wakefield',
 'stacked': 1,
 'annoline1': 'Wakefield',
 'annoline2': None,
 'annoline3': None,
 'annoangle': 0.0,
 'borough': 'Bronx',
 'bbox': [-73.84720052054902,
 40.89470517661,
 -73.84720052054902,
 40.89470517661]}}
```

The ‘Borough’, ‘Neighborhood’, ‘Latitude’, and ‘Longitude’ values associated with each neighborhood were then converted from JSON to a Pandas DataFrame that serves as the foundation of the analysis.

```
column_names = ['Borough', 'Neighborhood', 'Latitude', 'Longitude']
nyc_neighborhoods = pd.DataFrame(columns=column_names)

for data in nyc_neighborhood_data:
    borough = nyc_neighborhood_data = data['properties']['borough']
    neighborhood_name = data['properties']['name']

    neighborhood_latlon = data['geometry']['coordinates']
    neighborhood_lat = neighborhood_latlon[1]
    neighborhood_lon = neighborhood_latlon[0]

    nyc_neighborhoods = nyc_neighborhoods.append({'Borough': borough,
    'Neighborhood': neighborhood_name,
    'Latitude': neighborhood_lat,
    'Longitude': neighborhood_lon}, ignore_index=True)
nyc_neighborhoods.head(5)
```

| | Borough | Neighborhood | Latitude | Longitude |
|---|---------|--------------|-----------|------------|
| 0 | Bronx | Wakefield | 40.894705 | -73.847201 |
| 1 | Bronx | Co-op City | 40.874294 | -73.829939 |
| 2 | Bronx | Eastchester | 40.887556 | -73.827806 |
| 3 | Bronx | Fieldston | 40.895437 | -73.905643 |
| 4 | Bronx | Riverdale | 40.890834 | -73.912585 |

Foursquare Music-Related Venue Data

As mentioned in the Data Sources section of this report, Foursquare has numerous [‘Venue Categories’](#) that are used to identify each type of venue. A ‘get’ request to the ‘api.foursquare.com/v2/venues/search?’ endpoint that provides a category ID will return venues of that category. The example code below sends a ‘get’ request to Foursquare that asks for one venue with the “Music Store” category (categoryID = '4bf58dd8d48988d1fe941735'):

```
lat = 40.7484
lng = -73.9857
radius = 500 # Meters
categoryId = '4bf58dd8d48988d1fe941735'
limit = 1
endpoint = 'https://api.foursquare.com/v2/venues/search?'

url = '{}&client_id={}&client_secret={}&v={}&ll={},{}&radius={}&categoryId={}&limit={}'.format(
    endpoint,
    CLIENT_ID,
    CLIENT_SECRET,
    VERSION,
    lat,
    lng,
    radius,
    categoryId,
    limit
)

results = requests.get(url).json()
results
```

```
{'meta': {'code': 200, 'requestId': '5ca3f0024c1f6715df23be42'},
 'response': {'venues': [{'id': '54f4f7a0498e300bbb8c5817',
  'name': 'Buffet Group Wind Instrumentts',
  'location': {'lat': 40.752005,
  'lng': -73.988876,
  'labeledLatLngs': [{'label': 'display',
  'lat': 40.752005,
  'lng': -73.988876}]},
  'distance': 482,
  'cc': 'US',
  'city': 'New York',
  'state': 'NY',
  'country': 'United States',
  'formattedAddress': ['New York, NY', 'United States']},
  'categories': [{'id': '4bf58dd8d48988d1fe941735',
  'name': 'Music Store',
  'pluralName': 'Music Stores',
  'shortName': 'Music Store',
  'icon': {'prefix': 'https://ss3.4sqi.net/img/categories_v2/shops/music_instruments_',
  'suffix': '.png'},
  'primary': True}],
  'referralId': 'v-1554247682',
  'hasPerk': False}],
  'confident': True}]}
```

A preliminary dataset of music related venues associated with each New York City neighborhood was created by recursively sending 'get' requests to the previously mentioned endpoint, making sure the results are specific to venues with music related 'category IDs'. For each neighborhood, we can include all of the selected category IDs in a single 'get' request by passing them as comma separated values. Shown below is a function that creates the required url and an example:

```

1  def createURL(endpoint, CLIENT_ID, CLIENT_SECRET, VERSION, lat, lng, radius, categoryId):
2      url = '{}&client_id={}&client_secret={}&v={}&ll={},{&radius={}&categoryId={}&limit={}'.format(
3          endpoint,
4          CLIENT_ID,
5          CLIENT_SECRET,
6          VERSION,
7          lat,
8          lng,
9          radius,
10         categoryId,
11         limit
12     )
13     return url
14
15 endpoint = 'https://api.foursquare.com/v2/venues/search?'
16 categoryIds = ['4bf58dd8d48988d1e5931735', '4bf58dd8d48988d1e7931735', '4bf58dd8d48988d1e8931735',
17               '4bf58dd8d48988d1e9931735', '5032792091d4c4b30a586d5c', '56aa371be4b08b9a8d5734db',
18               '5267e4d9e4b0ec79466e48d1', '4d4b7105d754a06376d81259', '4bf58dd8d48988d1fe941735',
19               '4bf58dd8d48988d10d951735', '52f2ab2ebcbc57f1066b8b37',
20               ]
21 limit=50
22 radius = 1000
23 lat = 45.0000000
24 lng = -70.0000000
25 categoryId = ','.join(categoryIds)
26 url_example = createURL(endpoint, CLIENT_ID, CLIENT_SECRET, VERSION, lat, lng, radius, categoryId)
27 print(url_example)

```

```

https://api.foursquare.com/v2/venues/search?client_id=TTYSUWFUMJXP00B4DT3JJU0RB4GZ5C25DIEK3EJ2QBMHWK0&client_secret=
XU5LCC4PNFPR0JBA41A45ZHHHTAVTTNX1VJUZINIY1X2SF0E&v=20180605&ll=45.0,-70.0&radius=1000&categoryId=4bf58dd8d48988d1e59
31735,4bf58dd8d48988d1e7931735,4bf58dd8d48988d1e8931735,4bf58dd8d48988d1e9931735,5032792091d4c4b30a586d5c,56aa371be4b
08b9a8d5734db,5267e4d9e4b0ec79466e48d1,4d4b7105d754a06376d81259,4bf58dd8d48988d1fe941735,4bf58dd8d48988d10d951735,52f
2ab2ebcbc57f1066b8b37&limit=50

```

The following function recursively sends a 'get' request to Foursquare for each neighborhood that requests all music related venues. While looping through each neighborhood from the NYU dataset, the function appends each music related venue entry to a list and, after looping through each neighborhood, creates a DataFrame of all of the results. Included for each entry in the dataset are neighborhood name and location, and venue name, location, and category.

```

1  def getNearbyMusicVenues(neighborhoods, latitudes, longitudes, radius=1000):
2      endpoint = 'https://api.foursquare.com/v2/venues/search?'
3      venues_list = []
4
5      for hood_name, lat, lng in zip(neighborhoods, latitudes, longitudes):
6
7          url = createURL(endpoint, CLIENT_ID, CLIENT_SECRET, VERSION, lat, lng, radius, categoryId, limit)
8
9          results = requests.get(url).json()[ 'response' ][ 'venues' ]
10
11         for item in results:
12             venue_name = item[ 'name' ]
13             venue_category = item[ 'categories' ][ 0 ][ 'name' ]
14             venue_lat = item[ 'location' ][ 'lat' ]
15             venue_lng = item[ 'location' ][ 'lng' ]
16             try:
17                 venue_city = item[ 'location' ][ 'city' ]
18             except:
19                 venue_city = 'N/A'
20             venue_state = item[ 'location' ][ 'state' ]
21
22             venues_list.append((hood_name,
23                                 lat,
24                                 lng,
25                                 venue_name,
26                                 venue_category,
27                                 venue_lat,
28                                 venue_lng,
29                                 venue_city,
30                                 venue_state
31                                 ))
32
33     nearby_venues = pd.DataFrame([item for venue_list in venues_list for item in venue_list])
34     nearby_venues.columns = [ 'Neighborhood',
35                               'Neighborhood Latitude',
36                               'Neighborhood Longitude',
37                               'Venue Name',
38                               'Venue Category',
39                               'Venue Latitude',
40                               'Venue Longitude',
41                               'Venue City',
42                               'Venue State'
43                               ]
44     return nearby_venues
45
46     prelim_venue_data = getNearbyMusicVenues(nyc_neighborhoods[ 'Neighborhood' ],
47                                               nyc_neighborhoods[ 'Latitude' ],
48                                               nyc_neighborhoods[ 'Longitude' ],
49                                               radius
50                                               )

```

```

1  prelim_venue_data.head(5)

```

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue Name | Venue Category | Venue Latitude | Venue Longitude | Venue City | Venue State |
|---|--------------|-----------------------|------------------------|--------------------------|----------------|----------------|-----------------|------------|-------------|
| 0 | Wakefield | 40.894705 | -73.847201 | Major League Music Group | Music Venue | 40.891367 | -73.850088 | N/A | New York |
| 1 | Wakefield | 40.894705 | -73.847201 | Dyme Life Radio | Music Venue | 40.894541 | -73.843266 | Bronx | NY |
| 2 | Wakefield | 40.894705 | -73.847201 | Par-City | Music Venue | 40.890211 | -73.847002 | Bronx | NY |
| 3 | Wakefield | 40.894705 | -73.847201 | The Upper Room | Music Venue | 40.892567 | -73.846406 | N/A | New York |
| 4 | Wakefield | 40.894705 | -73.847201 | Tavern | Bar | 40.895898 | -73.855731 | Bronx | NY |

The resulting preliminary venue dataframe includes 9,442 venues that were pulled from Foursquare:

```
1 prelim_venue_data.shape
```

```
(9442, 9)
```

Since I had some issues with exceeding Foursquare's API rate limits, after the preliminary dataset was finally acquired I saved a copy to csv so that future development would not require re-requesting information from Foursquare.

```
1 prelim_venue_data.to_csv(path_or_buf='prelim_venue_data.csv')
```

| prelim_venue_data.csv | | | | | | | | |
|---------------------------|--------------|-----------------------|------------------------|--------------------------|----------------|--------------------|---------------------|------------|
| Open with Microsoft Excel | | | | | | | | |
| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue Name | Venue Category | Venue Latitude | Venue Longitude | Venue City |
| 0 | Wakefield | 40.89470517661 | -73.84720052054902 | Major League Music Group | Music Venue | 40.89136668917538 | -73.85008751159359 | N/A |
| 1 | Wakefield | 40.89470517661 | -73.84720052054902 | Dyme Life Radio | Music Venue | 40.894541333333336 | -73.843266000000001 | Bronx |
| 2 | Wakefield | 40.89470517661 | -73.84720052054902 | Par-City | Music Venue | 40.89021141 | -73.84700158 | Bronx |
| 3 | Wakefield | 40.89470517661 | -73.84720052054902 | The Upper Room | Music Venue | 40.892567 | -73.846406 | N/A |
| 4 | Wakefield | 40.89470517661 | -73.84720052054902 | Tavern | Bar | 40.895898 | -73.855731 | Bronx |

Exploratory Data Analysis

The series of images below are meant to capture my process for exploring the data retrieved from Foursquare in an effort to better understand what kind of venues were actually pulled during my requests. In a perfect world, each entry will be music-related and located in New York City, but this will need to be verified to ensure quality. The questions below will inform how the preliminary venue data will be pre-processed in the Data-Preprocessing section of this report.

Question: What states are the venues located in?

Answer: Most entries pulled from the API request included a 'state' parameter equal to either 'New York' or 'NY.' Some entries included a 'state' parameter equal to 'CA', 'MA', and 'NJ' and will need to be removed.

```
1 prelim_venue_data.groupby('Venue State')['Venue State'].count()
```

```
Venue State
CA          1
MA          4
NJ          15
NY         8786
New York    636
Name: Venue State, dtype: int64
```

Question: What venue categories are the entries in?

Answer: There are 149 unique venue categories included in this dataset. Some of the categories are not music related, which was a result of using higher level 'venue categories' defined by Foursquare. Non-music related categories will be removed.

What venue categories are the entries in?

```
1 n_unique = len(prelim_venue_data['Venue Category'].unique())
2 print(f'There are {n_unique} unique venue categories in this dataframe')
3 prelim_venue_data.groupby('Venue Category')['Venue Category'].count().sort_values(ascending=False)
```

There are 149 unique venue categories in this dataframe

```
Venue Category
Bar                2124
Lounge             901
Cocktail Bar       492
Music Venue        477
Nightclub          474
Other Nightlife    469
Pub                365
Wine Bar           277
Sports Bar         276
Hookah Bar         255
Beer Garden        218
Dive Bar           214
Karaoke Bar        178
American Restaurant 169
Concert Hall       142
Speakeasy          131
Nightlife Spot     120
Brewery            119
Record Shop        119
Rock Club          114
Music Store        108
Gay Bar            105
Hotel Bar          102
Strip Club         88
Recording Studio   79
Italian Restaurant 74
Beer Bar           71
```

Question: How many venues did not have their 'city' parameter filled-out?

Answer: The image below shows that there were quite a few venues that did not have a 'city' parameter filled-out. At first I thought this would not be an issue because I still have a latitude and longitude associated with the each entry. Upon further analysis, it was determined that entries with no 'city' parameter were no longer active establishments and thus will be removed.

How many venues did not have their 'city' parameter filled-out

```
1 n_unknown_cities = prelim_venue_data[prelim_venue_data['Venue City']=='N/A']['Venue Name'].count()
2 print(f'There were {n_unknown_cities} entries in the dataset without the "city" parameter filled-out')
```

There were 636 entries in the dataset without the "city" parameter filled-out

```
1 prelim_venue_data[prelim_venue_data['Venue City']=='N/A']['Venue Name'][:5]
```

```
0      Major League Music Group
3              The Upper Room
17             Boohran Pub
22              MY Studio
30             Expressions
Name: Venue Name, dtype: object
```

Question: Are there any null values in the dataset?

Answer: No.

Are there any 'null' values in the dataset?

```
1 prelim_venue_data.isnull().values.any()
```

False

Question: How many unique venues were retrieved?

Answer: In the preliminary dataset, there are less unique venue names than there are entries in total. This means that there are venues associated with more than one neighborhood, which is the result of queries that overlapped because of radius being set to 1000m in the API request. This will be accepted because the venue is within walking distance of the neighborhood centroid and can influence that neighborhood's scene.

How many unique venues are there?

```
1 n_unique_venues = len(prelim_venue_data['Venue Name'].unique())
2 print(f'There are {n_unique_venues} unique venues in the preliminary dataset')
```

There are 5039 unique venues in the preliminary dataset

Data Pre-Processing

Data Cleaning

The preliminary dataset will be cleaned according to the answers listed in the Exploratory Data Analysis section above. First, venues located in states other than “New York” or “NY” will be removed. Entries with “Venue State” equal to “New York” were changed to “NY.”

Remove venues with "Venue State" not equal to "New York" or "NY"

```
1 ny_venue_data = prelim_venue_data[(prelim_venue_data['Venue State'] == "New York") | (prelim_venue_data['Venue State'] == "NY")]
2 ny_venue_data['Venue State'].replace(to_replace="New York", value="NY", inplace=True)
3 delta = prelim_venue_data.shape[0] - ny_venue_data.shape[0]
4 print(f'{delta} entries were removed from the preliminary dataset based on "Venue State"')
5 ny_venue_data.head(5)
```

20 entries were removed from the preliminary dataset based on "Venue State"

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue Name | Venue Category | Venue Latitude | Venue Longitude | Venue City | Venue State |
|---|--------------|-----------------------|------------------------|--------------------------|----------------|----------------|-----------------|------------|-------------|
| 0 | Wakefield | 40.894705 | -73.847201 | Major League Music Group | Music Venue | 40.891367 | -73.850088 | N/A | NY |
| 1 | Wakefield | 40.894705 | -73.847201 | Dyme Life Radio | Music Venue | 40.894541 | -73.843266 | Bronx | NY |
| 2 | Wakefield | 40.894705 | -73.847201 | Par-City | Music Venue | 40.890211 | -73.847002 | Bronx | NY |
| 3 | Wakefield | 40.894705 | -73.847201 | The Upper Room | Music Venue | 40.892567 | -73.846406 | N/A | NY |
| 4 | Wakefield | 40.894705 | -73.847201 | Tavern | Bar | 40.895898 | -73.855731 | Bronx | NY |

Entries returned by Foursquare with no ‘Venue City’ and given the ‘N/A’ treatment were also removed:

Remove entries with "Venue City" equal to "N/A"

```
1 ny_venue_data_with_city = ny_venue_data[(ny_venue_data['Venue City'] != "N/A")]
2 delta = ny_venue_data.shape[0] - ny_venue_data_with_city.shape[0]
3 print(f'{delta} entries were removed based on "Venue City"')
4 ny_venue_data_with_city.head(5)
```

636 entries were removed based on "Venue City"

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue Name | Venue Category | Venue Latitude | Venue Longitude | Venue City | Venue State |
|---|--------------|-----------------------|------------------------|-------------------|-----------------|----------------|-----------------|--------------|-------------|
| 1 | Wakefield | 40.894705 | -73.847201 | Dyme Life Radio | Music Venue | 40.894541 | -73.843266 | Bronx | NY |
| 2 | Wakefield | 40.894705 | -73.847201 | Par-City | Music Venue | 40.890211 | -73.847002 | Bronx | NY |
| 4 | Wakefield | 40.894705 | -73.847201 | Tavern | Bar | 40.895898 | -73.855731 | Bronx | NY |
| 5 | Wakefield | 40.894705 | -73.847201 | M.O.S. Cigars | Smoke Shop | 40.890628 | -73.848478 | Bronx | NY |
| 6 | Wakefield | 40.894705 | -73.847201 | Inn At the Border | Other Nightlife | 40.898248 | -73.838641 | Mount Vernon | NY |

A list of music-related venue categories was created based on the unique venue categories included in the preliminary dataset. This list was used to filter out the non-music-related entries that snuck into our request.

Remove entries that are not associated with music-related categories

```
1 music_related_categories = ['Music Venue', 'Lounge', 'Nightclub', 'Jazz Club', 'Recording Studio', 'Piano Bar',
2                             'Record Shop', 'Concert Hall', 'Karaoke Bar', 'Music Store', 'Rock Club', 'Amphitheater',
3                             'Music Festival', 'Opera House', 'Music School']
4 ny_music_venues = ny_venue_data_with_city[ny_venue_data_with_city['Venue Category'].isin(music_related_categories)]
5 delta = ny_venue_data_with_city.shape[0] - ny_music_venues.shape[0]
6 print(f'{delta} entries were removed based on "Venue Category" not being related to music')
7 print(ny_music_venues['Venue Category'].unique())
8 ny_music_venues.head(5)
```

6477 entries were removed based on "Venue Category" not being related to music

```
['Music Venue' 'Lounge' 'Nightclub' 'Jazz Club' 'Piano Bar' 'Record Shop'
 'Concert Hall' 'Karaoke Bar' 'Music Store' 'Rock Club' 'Amphitheater'
 'Music Festival' 'Opera House' 'Music School']
```

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue Name | Venue Category | Venue Latitude | Venue Longitude | Venue City | Venue State |
|----|--------------|--------------------------|---------------------------|---|-------------------|-------------------|--------------------|---------------|----------------|
| 1 | Wakefield | 40.894705 | -73.847201 | Dyme Life Radio | Music Venue | 40.894541 | -73.843266 | Bronx | NY |
| 2 | Wakefield | 40.894705 | -73.847201 | Par-City | Music Venue | 40.890211 | -73.847002 | Bronx | NY |
| 12 | Wakefield | 40.894705 | -73.847201 | Emma C. Brisbane Youth Leadership Center | Lounge | 40.887923 | -73.853688 | Bronx | NY |
| 13 | Wakefield | 40.894705 | -73.847201 | Karma Lounge | Nightclub | 40.901605 | -73.850720 | Bronx | NY |
| 14 | Wakefield | 40.894705 | -73.847201 | Wenbley Lounge | Lounge | 40.897526 | -73.859468 | Bronx | NY |

The image below shows the total number of entries and number of unique entries in the ny_music_venues dataframe. As previously mentioned, some venues are assigned to multiple neighborhoods because the venue is within 1,000 meters of the neighborhood's centroid location.

How many music venue entries are left?

```
1 n_entries = ny_music_venues.shape[0]
2 print(f'There are {n_entries} entries in the ny_music_venues dataframe')
```

There are 2309 entries in the ny_music_venues dataframe

How many unique music venues are left?

```
1 n_unique_entries = len(ny_music_venues['Venue Name'].unique())
2 print(f'There are {n_unique_entries} unique entries in the ny_music_venues dataframe')
```

There are 1282 unique entries in the ny_music_venues dataframe

One-Hot-Encoding Venue Categories

In order to use Foursquare's category values to find similar neighborhoods based on music venues, a one-hot-encoding representation of each entry was created using Pandas' 'get_dummies' function. The result is a dataframe of New York City music-related venues where entry venue category is represented by a value of 1 in the column of matching venue category, as shown below:

One-Hot-Encode Venue Categories

```
1 ny_venue_category_onehot = pd.get_dummies(ny_music_venues[['Venue Category']], prefix="", prefix_sep="")
2
3 ny_venue_category_onehot['Neighborhood'] = ny_music_venues['Neighborhood']
4
5 fixed_columns = [ny_venue_category_onehot.columns[-1]] + list(ny_venue_category_onehot.columns[:-1])
6 ny_venue_category_onehot = ny_venue_category_onehot[fixed_columns]
7
8 print(ny_venue_category_onehot.shape)
9 ny_venue_category_onehot.head(10)
```

(2385, 16)

| | Neighborhood | Amphitheater | Concert Hall | Jazz Club | Karaoke Bar | Lounge | Music Festival | Music School | Music Store | Music Venue | Nightclub | Opera House | Piano Bar | Record Shop | Recording Studio | Rock Club |
|----|--------------|--------------|--------------|-----------|-------------|--------|----------------|--------------|-------------|-------------|-----------|-------------|-----------|-------------|------------------|-----------|
| 1 | Wakefield | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | Wakefield | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | Wakefield | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | Wakefield | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 14 | Wakefield | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | Wakefield | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | Wakefield | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 23 | Wakefield | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | Co-op City | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | Co-op City | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

Feature Generation

The encoded dataset of music-related venues in New York City can be used to quantify a music profile for each neighborhood. For each venue category, the percent distribution of venues across each neighborhood is calculated. This information will be used to determine which neighborhoods are similar.

First, the total number of venues for each category is determined:

Determine the total amount of venues of each category

```
1 venue_totals = {}
2 for category in music_related_categories:
3     venue_totals[category] = venue_counts[category].sum()
4
5 venue_totals
```

```
{'Music Venue': 431,
'Lounge': 816,
'Nightclub': 425,
'Jazz Club': 47,
'Recording Studio': 76,
'Piano Bar': 23,
'Record Shop': 100,
'Concert Hall': 115,
'Karaoke Bar': 138,
'Music Store': 100,
'Rock Club': 104,
'Amphitheater': 3,
'Music Festival': 1,
'Opera House': 1,
'Music School': 5}
```

Venue counts are determined for each neighborhood in New York City:

Determine the total amount of venues of each category in each neighborhood

```
1 venue_counts = ny_venue_category_onehot.groupby('Neighborhood').sum()
2 venue_counts.head(10)
```

| | Amphitheater | Concert Hall | Jazz Club | Karaoke Bar | Lounge | Music Festival | Music School | Music Store | Music Venue | Nightclub | Opera House | Piano Bar | Record Shop | Recording Studio | Rock Club |
|-----------------|--------------|--------------|-----------|-------------|--------|----------------|--------------|-------------|-------------|-----------|-------------|-----------|-------------|------------------|-----------|
| Neighborhood | | | | | | | | | | | | | | | |
| Allerton | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 |
| Arden Heights | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrochar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Astoria | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Astoria Heights | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 |
| Auburndale | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 1 |
| Bath Beach | 0 | 0 | 0 | 1 | 9 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Bay Ridge | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bay Terrace | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| Baychester | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 |

Finally, the percentage of venues in each neighborhood is calculated with respect to the total amount of venues in the dataset, by venue category. So it's clear, the value shown in the "Lounge" column for Astoria represents the percentage of lounges in the dataset that are located in Astoria.

For each venue category, determine the percentage of entities in each neighborhood

```
1 for category, total in venue_totals.items():
2     venue_mean[category] = venue_counts[category].apply(lambda x: x / total)
3 venue_mean = venue_mean.reindex(sorted(venue_mean.columns), axis=1)
4 venue_mean.head(5)
```

| | Amphitheater | Concert Hall | Jazz Club | Karaoke Bar | Lounge | Music Festival | Music School | Music Store | Music Venue | Nightclub | Opera House | Piano Bar | Record Shop | Recording Studio | Rock Club |
|-----------------|--------------|--------------|-----------|-------------|----------|----------------|--------------|-------------|-------------|-----------|-------------|-----------|-------------|------------------|-----------|
| Neighborhood | | | | | | | | | | | | | | | |
| Allerton | 0.0 | 0.000000 | 0.0 | 0.000000 | 0.003676 | 0.0 | 0.0 | 0.0 | 0.00464 | 0.007059 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 |
| Arden Heights | 0.0 | 0.008696 | 0.0 | 0.000000 | 0.001225 | 0.0 | 0.0 | 0.0 | 0.000000 | 0.000000 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 |
| Arrochar | 0.0 | 0.000000 | 0.0 | 0.000000 | 0.000000 | 0.0 | 0.0 | 0.0 | 0.000000 | 0.002353 | 0.0 | 0.0 | 0.01 | 0.0 | 0.0 |
| Astoria | 0.0 | 0.000000 | 0.0 | 0.007246 | 0.001225 | 0.0 | 0.0 | 0.0 | 0.000000 | 0.000000 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 |
| Astoria Heights | 0.0 | 0.000000 | 0.0 | 0.007246 | 0.003676 | 0.0 | 0.0 | 0.0 | 0.00232 | 0.004706 | 0.0 | 0.0 | 0.00 | 0.0 | 0.0 |

With the above, a dataframe showing the top five music venue categories for each neighborhood can be created:

Creating a dataframe that shows the top 5 venue categories each neighborhood is known for

```
1 def return_top_venue_categories(row, num_top_venues):
2     row_categories = row.iloc[1:]
3     row_categories_sorted = row_categories.sort_values(ascending=False)
4
5     return row_categories_sorted.index.values[0:num_top_venues]
```

```
1 num_top_venues = 5
2
3 indicators = ['st', 'nd', 'rd']
4
5 # create columns according to number of top venues
6 columns = ['Neighborhood']
7 for ind in np.arange(num_top_venues):
8     try:
9         columns.append('{} {} Top Venue Category'.format(ind+1, indicators[ind]))
10    except:
11        columns.append('{}th Top Venue Category'.format(ind+1))
12
13 neighborhoods_top_venue_categories = pd.DataFrame(columns=columns)
14 neighborhoods_top_venue_categories['Neighborhood'] = venue_mean['Neighborhood']
15
16 for ind in np.arange(venue_mean.shape[0]):
17     neighborhoods_top_venue_categories.iloc[ind, 1:] = return_top_venue_categories(venue_mean.iloc[ind, :], num_top_venues)
18
19 neighborhoods_top_venue_categories.head(5)
```

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|---|-----------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 0 | Allerton | Nightclub | Music Venue | Lounge | Rock Club | Recording Studio |
| 1 | Arden Heights | Concert Hall | Lounge | Rock Club | Recording Studio | Record Shop |
| 2 | Arrochar | Record Shop | Nightclub | Rock Club | Recording Studio | Piano Bar |
| 3 | Astoria | Karaoke Bar | Lounge | Rock Club | Recording Studio | Record Shop |
| 4 | Astoria Heights | Karaoke Bar | Nightclub | Lounge | Music Venue | Rock Club |

Results

Predictive Modeling

Scikit-learn's K-Means clustering was used to determine similar neighborhoods based on music venue percentage. The image below shows the data being scaled and the K-Means model being created:

Create KMeans Model To Cluster Neighborhoods

```
1 from sklearn.cluster import KMeans
2 from sklearn.preprocessing import StandardScaler
3
4 # set number of clusters
5 kclusters = 5
6 scaler = StandardScaler()
7
8 venue_grouped_clustering = venue_mean.drop('Neighborhood', 1)
9 scaler.fit(venue_grouped_clustering)
10 scaled_venue_grouped_clustering = scaler.transform(venue_grouped_clustering)
11
12 # run k-means clustering
13 kmeans = KMeans(n_clusters=kclusters, random_state=0).fit(scaled_venue_grouped_clustering)
14
15 # check cluster labels generated for each row in the dataframe
16 kmeans.labels_
```

```
array([1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 0, 1, 1, 1, 1, 0, 0, 2, 1, 0,
       0, 0, 2, 1, 2, 1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 2, 1, 0,
       1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 0, 1, 2, 1, 0, 0, 0, 1, 1, 1, 2,
       1, 1, 0, 1, 1, 1, 2, 1, 2, 1, 1, 1, 1, 0, 1, 2, 0, 1, 0, 1, 0, 1,
       0, 2, 4, 0, 1, 0, 1, 1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 0,
       1, 1, 2, 2, 2, 1, 2, 0, 0, 1, 2, 1, 0, 1, 1, 1, 4, 1, 0, 0, 0, 1,
       0, 0, 1, 1, 1, 1, 2, 1, 1, 3, 1, 2, 1, 4, 0, 2, 0, 2, 1, 0, 1,
       0, 1, 1, 0, 1, 2, 0, 1, 1, 1, 1, 0, 1, 1, 0, 0, 2, 0, 1, 0, 0, 4,
       1, 2, 1, 1, 1, 1, 2, 1, 1, 1, 1, 1, 1, 2, 0, 1, 0, 1, 1, 1, 0, 1,
       1, 1, 1, 1, 1, 1, 1, 0, 0, 1, 1, 4, 0, 1, 0, 2, 0, 0, 1, 1, 1,
       1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 1, 1, 1,
       1, 1, 2, 2, 1, 1, 2, 1, 2, 1, 1, 2, 1, 1, 1, 0, 0, 1, 1, 1,
       0, 2, 1, 0, 0, 0, 1, 1, 2, 1, 2, 1, 1, 1, 2, 0, 0, 1, 1, 1, 1],
      dtype=int32)
```

A new dataframe was created by merging neighborhood location data, top venue category by neighborhood, and cluster labels.

Creating a new dataframe merging neighborhood location data, top venue category by neighborhood, and cluster labels

```
1 neighborhoods_top_venue_categories.insert(1, 'Cluster Labels', kmeans.labels_)
2
3 ny_neighborhood_music_profile = nyc_neighborhoods.drop(columns=['Borough', 'Radius'])
4
5 ny_neighborhood_music_profile = ny_neighborhood_music_profile.join(neighborhoods_top_venue_categories.set_index('Neighborhood'))
6
7 ny_neighborhood_music_profile.head()
```

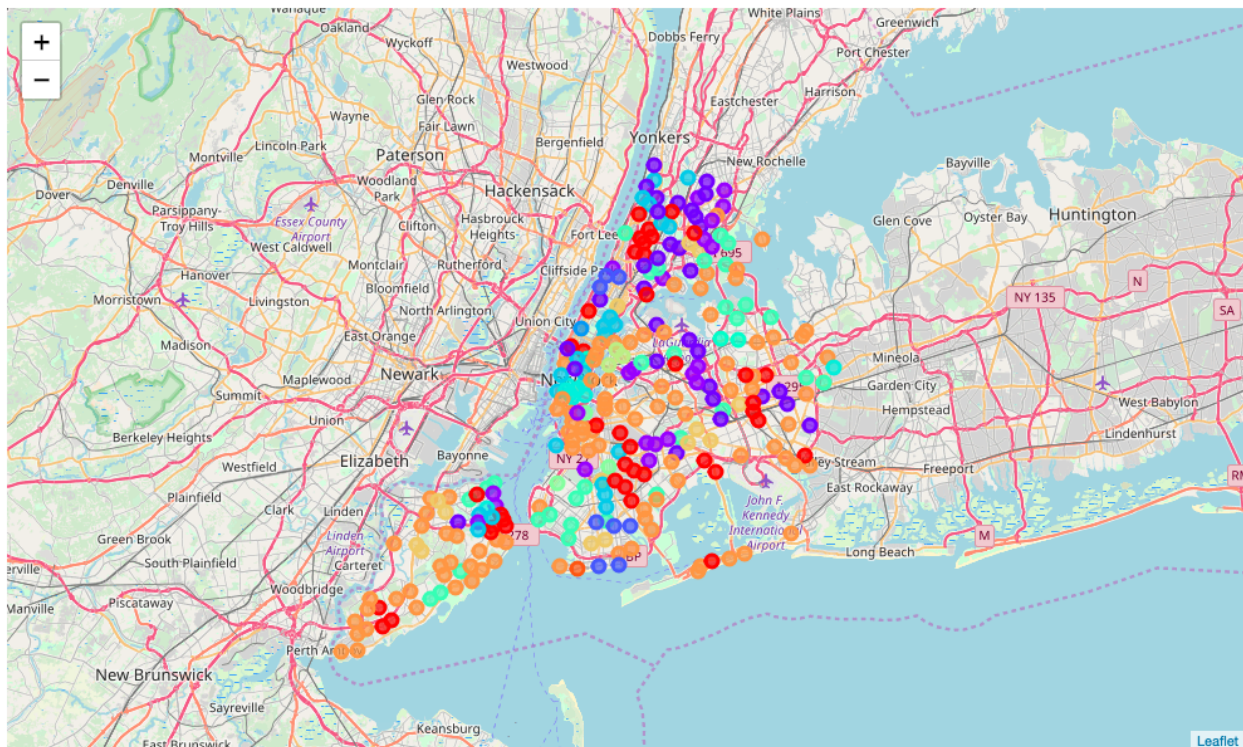
| | Neighborhood | Latitude | Longitude | Cluster Labels | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|---|--------------|-----------|------------|----------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 0 | Wakefield | 40.894705 | -73.847201 | 2.0 | Music Venue | Nightclub | Lounge | Rock Club | Recording Studio |
| 1 | Co-op City | 40.874294 | -73.829939 | 1.0 | Jazz Club | Recording Studio | Nightclub | Music Venue | Rock Club |
| 2 | Eastchester | 40.887556 | -73.827806 | 1.0 | Recording Studio | Jazz Club | Nightclub | Music Venue | Rock Club |
| 3 | Fieldston | 40.895437 | -73.905643 | 5.0 | Piano Bar | Record Shop | Music Venue | Lounge | Nightclub |
| 4 | Riverdale | 40.890834 | -73.912585 | 2.0 | Music Venue | Nightclub | Lounge | Rock Club | Recording Studio |

Cluster Visualization

The following code uses folium to visualize neighborhoods of similar music profile by coloring each neighborhood point based on cluster label:

Creating A Visualization of The Clusters

```
1 # create map
2 import matplotlib.cm as cm
3 import matplotlib.colors as colors
4 latitude = 40.730610
5 longitude = -73.935242
6 map_clusters = folium.Map(location=[latitude, longitude], zoom_start=10)
7
8 # set color scheme for the clusters
9 x = np.arange(kclusters)
10 ys = [i + x + (i*x)**2 for i in range(kclusters)]
11 colors_array = cm.rainbow(np.linspace(0, 1, len(ys)))
12 rainbow = [colors.rgb2hex(i) for i in colors_array]
13
14 # add markers to the map
15 markers_colors = []
16 for lat, lon, poi, cluster in zip(ny_neighborhood_music_profile['Latitude'], ny_neighborhood_music_profile['Longitude'], ny_neighborhood_music_profile['Name'], ny_neighborhood_music_profile['Cluster']):
17     label = folium.Popup(str(poi) + ' Cluster ' + str(cluster), parse_html=True)
18     folium.CircleMarker(
19         [lat, lon],
20         radius=5,
21         popup=label,
22         color=rainbow[int(cluster)-1],
23         fill=True,
24         fill_color=rainbow[int(cluster)-1],
25         fill_opacity=0.7).add_to(map_clusters)
26
27 map_clusters
```



Cluster Evaluation

The following code iterates through and prints the results of each cluster:

Examining Clusters

```
1 for cluster in range(0, kclusters):  
2     print(f'Cluster {cluster}:')  
3     print(ny_neighborhood_music_profile.loc[ny_neighborhood_music_profile['Cluster Labels'] == cluster, ny_neighbo
```

The resulting clusters can be seen in the Clusters section of this document's Appendix.

Discussion

Conclusion

References

[0] - [2014 New York City Neighborhood Names - NYU Spatial Data Repository](#)

[1] - [‘Places API’ Documentation - Foursquare](#)

Appendix

Clusters

Cluster 0:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|-----------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 22 | Port Morris | Concert Hall | Music Venue | Lounge | Nightclub | Rock Club |
| 84 | Clinton Hill | Recording Studio | Record Shop | Concert Hall | Lounge | Music Venue |
| 111 | Upper West Side | Jazz Club | Concert Hall | Karaoke Bar | Music Venue | Lounge |
| 113 | Clinton | Concert Hall | Music Venue | Lounge | Nightclub | Rock Club |
| 114 | Midtown | Concert Hall | Music Venue | Lounge | Nightclub | Rock Club |
| 133 | Howard Beach | Rock Club | Concert Hall | Music Venue | Lounge | Recording Studio |
| 158 | Fresh Meadows | Music Store | Concert Hall | Lounge | Rock Club | Recording Studio |
| 164 | South Jamaica | Music Store | Concert Hall | Rock Club | Music Venue | Lounge |
| 187 | Lindenwood | Concert Hall | Lounge | Music Venue | Rock Club | Recording Studio |
| 188 | Laurelton | Concert Hall | Lounge | Music Venue | Rock Club | Recording Studio |
| 191 | Rockaway Park | Concert Hall | Music Venue | Rock Club | Recording Studio | Record Shop |
| 200 | Rosebank | Concert Hall | Music Store | Music Venue | Lounge | Rock Club |
| 216 | Woodrow | Concert Hall | Rock Club | Nightclub | Music Venue | Recording Studio |
| 224 | Park Hill | Concert Hall | Lounge | Rock Club | Recording Studio | Record Shop |
| 236 | Huguenot | Concert Hall | Music Venue | Rock Club | Recording Studio | Record Shop |
| 252 | Shore Acres | Concert Hall | Music Store | Music Venue | Lounge | Rock Club |
| 253 | Clifton | Concert Hall | Music Venue | Music Store | Nightclub | Lounge |
| 254 | Concord | Concert Hall | Lounge | Rock Club | Recording Studio | Record Shop |
| 256 | Randall Manor | Jazz Club | Music Store | Concert Hall | Music Venue | Lounge |
| 265 | Pomonok | Music Store | Concert Hall | Nightclub | Rock Club | Recording Studio |
| 291 | Prince's Bay | Concert Hall | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 297 | Bronxdale | Music Store | Concert Hall | Karaoke Bar | Music Venue | Lounge |

Cluster 1:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|--------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 1 | Co-op City | Jazz Club | Recording Studio | Nightclub | Music Venue | Rock Club |
| 2 | Eastchester | Recording Studio | Jazz Club | Nightclub | Music Venue | Rock Club |
| 9 | Williamsbridge | Recording Studio | Record Shop | Nightclub | Lounge | Music Venue |
| 23 | Longwood | Recording Studio | Record Shop | Music Store | Nightclub | Concert Hall |
| 31 | Westchester Square | Recording Studio | Rock Club | Nightclub | Lounge | Music Venue |
| 33 | Morris Park | Recording Studio | Rock Club | Concert Hall | Karaoke Bar | Nightclub |
| 42 | Pelham Gardens | Recording Studio | Concert Hall | Karaoke Bar | Nightclub | Music Venue |
| 58 | Windsor Terrace | Recording Studio | Rock Club | Concert Hall | Record Shop | Music Store |
| 60 | Brownsville | Recording Studio | Record Shop | Rock Club | Concert Hall | Lounge |
| 89 | Ocean Hill | Recording Studio | Rock Club | Lounge | Nightclub | Music Venue |
| 103 | Hamilton Heights | Recording Studio | Record Shop | Rock Club | Music Venue | Nightclub |
| 134 | Corona | Recording Studio | Nightclub | Lounge | Music Venue | Rock Club |
| 140 | Sunnyside | Piano Bar | Recording Studio | Jazz Club | Rock Club | Concert Hall |
| 145 | Rego Park | Recording Studio | Concert Hall | Karaoke Bar | Music Venue | Lounge |
| 189 | Lefrak City | Recording Studio | Concert Hall | Nightclub | Lounge | Music Venue |
| 199 | Stapleton | Recording Studio | Rock Club | Music Venue | Nightclub | Lounge |
| 218 | Tompkinsville | Recording Studio | Rock Club | Music Store | Lounge | Nightclub |
| 220 | Sunnyside | Piano Bar | Recording Studio | Jazz Club | Rock Club | Concert Hall |
| 278 | Blissville | Recording Studio | Nightclub | Concert Hall | Lounge | Music Venue |
| 282 | Broadway Junction | Recording Studio | Nightclub | Rock Club | Lounge | Music Venue |
| 283 | Dumbo | Recording Studio | Record Shop | Rock Club | Concert Hall | Music Venue |
| 295 | Highland Park | Nightclub | Recording Studio | Lounge | Music Venue | Rock Club |

Cluster 2:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 0 | Wakefield | Music Venue | Nightclub | Lounge | Rock Club | Recording Studio |
| 4 | Riverdale | Music Venue | Nightclub | Lounge | Rock Club | Recording Studio |
| 5 | Kingsbridge | Music Venue | Lounge | Nightclub | Rock Club | Recording Studio |
| 8 | Norwood | Lounge | Music Venue | Nightclub | Rock Club | Recording Studio |
| 11 | Pelham Parkway | Recording Studio | Karaoke Bar | Music Venue | Lounge | Rock Club |
| 17 | East Tremont | Lounge | Music Venue | Nightclub | Rock Club | Recording Studio |
| 18 | West Farms | Music Venue | Lounge | Nightclub | Rock Club | Recording Studio |
| 21 | Mott Haven | Concert Hall | Nightclub | Lounge | Music Venue | Rock Club |
| 26 | Soundview | Lounge | Music Venue | Rock Club | Recording Studio | Record Shop |
| 36 | North Riverdale | Lounge | Music Venue | Nightclub | Rock Club | Recording Studio |
| 41 | Olinville | Recording Studio | Music Venue | Lounge | Nightclub | Rock Club |
| 45 | Edenwald | Lounge | Nightclub | Music Venue | Rock Club | Recording Studio |
| 72 | East New York | Nightclub | Music Venue | Lounge | Rock Club | Recording Studio |
| 124 | Manhattan Valley | Jazz Club | Record Shop | Karaoke Bar | Music Venue | Lounge |
| 130 | Woodside | Nightclub | Lounge | Rock Club | Recording Studio | Record Shop |
| 135 | Forest Hills | Music Venue | Lounge | Karaoke Bar | Rock Club | Recording Studio |
| 137 | Richmond Hill | Lounge | Nightclub | Music Venue | Rock Club | Recording Studio |
| 141 | East Elmhurst | Nightclub | Lounge | Rock Club | Recording Studio | Record Shop |
| 163 | Hollis | Recording Studio | Rock Club | Lounge | Music Venue | Record Shop |
| 168 | Cambria Heights | Record Shop | Lounge | Nightclub | Music Venue | Rock Club |
| 173 | Steinway | Recording Studio | Record Shop | Music Venue | Nightclub | Lounge |
| 182 | Holliswood | Recording Studio | Concert Hall | Music Venue | Lounge | Nightclub |
| 183 | Jamaica Estates | Lounge | Nightclub | Music Venue | Rock Club | Recording Studio |
| 195 | North Corona | Concert Hall | Lounge | Nightclub | Rock Club | Recording Studio |
| 196 | Forest Hills Gardens | Music Store | Music Venue | Lounge | Rock Club | Recording Studio |
| 208 | Castleton Corners | Music Venue | Lounge | Rock Club | Recording Studio | Record Shop |
| 267 | Claremont Village | Record Shop | Concert Hall | Karaoke Bar | Lounge | Nightclub |
| 268 | Concourse Village | Karaoke Bar | Lounge | Nightclub | Music Venue | Rock Club |
| 276 | Flatiron | Music Venue | Lounge | Nightclub | Rock Club | Recording Studio |
| 298 | Allerton | Nightclub | Music Venue | Lounge | Rock Club | Recording Studio |
| 299 | Kingsbridge Heights | Music Venue | Lounge | Nightclub | Rock Club | Recording Studio |
| 301 | Hudson Yards | Music Venue | Nightclub | Lounge | Rock Club | Recording Studio |

Cluster 3:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|---------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 51 | Brighton Beach | Jazz Club | Music Store | Nightclub | Karaoke Bar | Lounge |
| 77 | Manhattan Beach | Jazz Club | Concert Hall | Karaoke Bar | Nightclub | Lounge |
| 83 | Marine Park | Jazz Club | Record Shop | Music Store | Lounge | Music Venue |
| 98 | Ocean Parkway | Jazz Club | Record Shop | Karaoke Bar | Music Store | Recording Studio |
| 104 | Manhattanville | Jazz Club | Concert Hall | Record Shop | Music Store | Lounge |
| 105 | Central Harlem | Jazz Club | Record Shop | Music Store | Lounge | Nightclub |
| 125 | Morningside Heights | Jazz Club | Concert Hall | Music Store | Music Venue | Lounge |
| 296 | Madison | Jazz Club | Record Shop | Karaoke Bar | Recording Studio | Music Store |

Cluster 4:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|----------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 112 | Lincoln Square | Opera House | Concert Hall | Jazz Club | Music Venue | Lounge |

Cluster 5:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|-----------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 3 | Fieldston | Piano Bar | Record Shop | Music Venue | Lounge | Nightclub |
| 6 | Marble Hill | Piano Bar | Concert Hall | Nightclub | Music Venue | Lounge |
| 7 | Woodlawn | Piano Bar | Music Venue | Lounge | Nightclub | Rock Club |
| 16 | Fordham | Piano Bar | Music Store | Music Venue | Concert Hall | Lounge |
| 34 | Belmont | Piano Bar | Music Store | Nightclub | Music Venue | Concert Hall |
| 35 | Spuyten Duyvil | Piano Bar | Music Venue | Concert Hall | Nightclub | Lounge |
| 54 | Flatbush | Piano Bar | Lounge | Music Store | Nightclub | Concert Hall |
| 55 | Crown Heights | Piano Bar | Music Venue | Recording Studio | Lounge | Record Shop |
| 67 | Red Hook | Piano Bar | Concert Hall | Record Shop | Music Store | Karaoke Bar |
| 92 | Midwood | Piano Bar | Jazz Club | Karaoke Bar | Recording Studio | Nightclub |
| 107 | Upper East Side | Piano Bar | Rock Club | Recording Studio | Record Shop | Opera House |
| 108 | Yorkville | Piano Bar | Rock Club | Recording Studio | Record Shop | Opera House |
| 109 | Lenox Hill | Piano Bar | Rock Club | Recording Studio | Record Shop | Opera House |
| 120 | Tribeca | Piano Bar | Jazz Club | Karaoke Bar | Nightclub | Rock Club |
| 123 | West Village | Piano Bar | Jazz Club | Rock Club | Nightclub | Recording Studio |
| 126 | Gramercy | Piano Bar | Music Venue | Lounge | Nightclub | Rock Club |
| 219 | Silver Lake | Piano Bar | Jazz Club | Rock Club | Record Shop | Concert Hall |
| 221 | Ditmas Park | Piano Bar | Music Store | Lounge | Karaoke Bar | Nightclub |
| 247 | Carnegie Hill | Piano Bar | Lounge | Rock Club | Recording Studio | Record Shop |
| 250 | Midtown South | Piano Bar | Music Venue | Lounge | Nightclub | Rock Club |
| 255 | Emerson Hill | Piano Bar | Jazz Club | Rock Club | Concert Hall | Karaoke Bar |
| 305 | Fox Hills | Piano Bar | Jazz Club | Rock Club | Concert Hall | Karaoke Bar |

Cluster 6:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|-------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 100 | Chinatown | Rock Club | Karaoke Bar | Lounge | Recording Studio | Record Shop |
| 117 | Greenwich Village | Jazz Club | Rock Club | Lounge | Recording Studio | Record Shop |
| 118 | East Village | Rock Club | Music Venue | Nightclub | Lounge | Recording Studio |
| 119 | Lower East Side | Rock Club | Lounge | Recording Studio | Record Shop | Piano Bar |
| 121 | Little Italy | Rock Club | Music Venue | Lounge | Recording Studio | Record Shop |
| 122 | Soho | Rock Club | Lounge | Recording Studio | Record Shop | Piano Bar |
| 181 | Floral Park | Rock Club | Concert Hall | Lounge | Recording Studio | Record Shop |
| 202 | Grymes Hill | Rock Club | Jazz Club | Recording Studio | Concert Hall | Karaoke Bar |
| 248 | Noho | Rock Club | Music Venue | Lounge | Recording Studio | Record Shop |

Cluster 7:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|--------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 115 | Murray Hill | Music School | Karaoke Bar | Concert Hall | Lounge | Rock Club |
| 138 | Flushing | Music School | Karaoke Bar | Music Store | Lounge | Nightclub |
| 180 | Murray Hill | Music School | Karaoke Bar | Concert Hall | Lounge | Rock Club |

Cluster 8:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|--------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 20 | Melrose | Music Store | Concert Hall | Karaoke Bar | Nightclub | Lounge |
| 25 | Morrisania | Record Shop | Music Store | Concert Hall | Karaoke Bar | Nightclub |
| 29 | Country Club | Jazz Club | Music Store | Rock Club | Lounge | Music Venue |
| 37 | Pelham Bay | Recording Studio | Music Store | Karaoke Bar | Music Venue | Lounge |
| 38 | Schuylerville | Music Store | Rock Club | Lounge | Nightclub | Music Venue |
| 44 | Unionport | Music Store | Record Shop | Lounge | Nightclub | Music Venue |
| 47 | Bensonhurst | Jazz Club | Music Store | Rock Club | Record Shop | Lounge |
| 53 | Manhattan Terrace | Karaoke Bar | Jazz Club | Music Store | Recording Studio | Record Shop |
| 57 | Kensington | Record Shop | Music Store | Rock Club | Nightclub | Concert Hall |
| 71 | Cypress Hills | Record Shop | Music Store | Rock Club | Lounge | Nightclub |
| 74 | Canarsie | Music Store | Rock Club | Music Venue | Lounge | Nightclub |
| 79 | Bath Beach | Lounge | Music Store | Rock Club | Karaoke Bar | Nightclub |
| 80 | Borough Park | Music Store | Rock Club | Nightclub | Lounge | Music Venue |
| 81 | Dyker Heights | Music Store | Rock Club | Concert Hall | Music Venue | Lounge |
| 99 | Fort Hamilton | Music Store | Karaoke Bar | Nightclub | Lounge | Music Venue |
| 101 | Washington Heights | Music Store | Rock Club | Lounge | Karaoke Bar | Music Venue |
| 131 | Jackson Heights | Nightclub | Music Store | Lounge | Rock Club | Recording Studio |
| 136 | Kew Gardens | Music Store | Lounge | Music Venue | Nightclub | Rock Club |
| 150 | Whitestone | Rock Club | Recording Studio | Music Store | Karaoke Bar | Music Venue |
| 156 | Bellerose | Music Store | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 174 | Beechhurst | Recording Studio | Music Store | Music Venue | Nightclub | Rock Club |
| 175 | Bay Terrace | Music Store | Music Venue | Lounge | Nightclub | Rock Club |

Cluster 9:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|---------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 48 | Sunset Park | Amphitheater | Recording Studio | Karaoke Bar | Record Shop | Music Venue |
| 88 | Prospect Lefferts Gardens | Amphitheater | Jazz Club | Record Shop | Lounge | Rock Club |
| 280 | Vinegar Hill | Amphitheater | Recording Studio | Rock Club | Music Venue | Concert Hall |

Cluster 10:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 139 | Long Island City | Music School | Recording Studio | Record Shop | Nightclub | Music Venue |
| 272 | Hunters Point | Music School | Recording Studio | Record Shop | Music Venue | Nightclub |
| 304 | Queensbridge | Music School | Recording Studio | Record Shop | Rock Club | Music Venue |

Cluster 11:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|---------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 30 | Parkchester | Record Shop | Rock Club | Concert Hall | Lounge | Music Venue |
| 32 | Van Nest | Record Shop | Music Venue | Music Store | Concert Hall | Lounge |
| 50 | Gravesend | Record Shop | Karaoke Bar | Music Store | Lounge | Nightclub |
| 90 | City Line | Record Shop | Music Store | Lounge | Rock Club | Karaoke Bar |
| 93 | Prospect Park South | Record Shop | Lounge | Rock Club | Nightclub | Music Venue |
| 106 | East Harlem | Record Shop | Music Store | Nightclub | Music Venue | Rock Club |
| 146 | Woodhaven | Record Shop | Karaoke Bar | Lounge | Music Store | Rock Club |
| 147 | Ozone Park | Record Shop | Music Store | Rock Club | Lounge | Karaoke Bar |
| 159 | Briarwood | Jazz Club | Record Shop | Nightclub | Music Venue | Lounge |
| 209 | New Springville | Record Shop | Rock Club | Recording Studio | Piano Bar | Opera House |
| 225 | Westerleigh | Record Shop | Music Venue | Lounge | Nightclub | Rock Club |
| 243 | Heartland Village | Record Shop | Rock Club | Recording Studio | Piano Bar | Opera House |
| 258 | Elm Park | Record Shop | Rock Club | Nightclub | Lounge | Recording Studio |
| 289 | Homecrest | Record Shop | Concert Hall | Music Store | Lounge | Karaoke Bar |

Cluster 12:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|--------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 10 | Baychester | Concert Hall | Karaoke Bar | Nightclub | Music Venue | Lounge |
| 12 | City Island | Music Venue | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 24 | Hunts Point | Recording Studio | Nightclub | Music Venue | Rock Club | Record Shop |
| 27 | Clason Point | Rock Club | Lounge | Recording Studio | Record Shop | Piano Bar |
| 28 | Throgs Neck | Lounge | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 39 | Edgewater Park | Lounge | Music Venue | Rock Club | Recording Studio | Record Shop |
| 40 | Castle Hill | Lounge | Nightclub | Rock Club | Recording Studio | Record Shop |
| 46 | Bay Ridge | Music Store | Karaoke Bar | Music Venue | Lounge | Rock Club |
| 49 | Greenpoint | Karaoke Bar | Nightclub | Music Venue | Rock Club | Recording Studio |
| 52 | Sheepshead Bay | Karaoke Bar | Lounge | Nightclub | Rock Club | Recording Studio |
| 59 | Prospect Heights | Nightclub | Music Venue | Rock Club | Recording Studio | Record Shop |
| 61 | Williamsburg | Rock Club | Nightclub | Music Venue | Recording Studio | Record Shop |
| 62 | Bushwick | Music Venue | Nightclub | Rock Club | Recording Studio | Record Shop |
| 64 | Brooklyn Heights | Recording Studio | Rock Club | Concert Hall | Lounge | Record Shop |
| 65 | Cobble Hill | Lounge | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 66 | Carroll Gardens | Rock Club | Lounge | Recording Studio | Record Shop | Piano Bar |
| 68 | Gowanus | Rock Club | Nightclub | Lounge | Recording Studio | Record Shop |
| 69 | Fort Greene | Nightclub | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 70 | Park Slope | Nightclub | Music Venue | Rock Club | Recording Studio | Record Shop |
| 73 | Starrett City | Music Venue | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 76 | Mill Island | Music Store | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 82 | Gerritsen Beach | Nightclub | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 85 | Sea Gate | Music Venue | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 86 | Downtown | Nightclub | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 87 | Boerum Hill | Nightclub | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 94 | Georgetown | Lounge | Nightclub | Rock Club | Recording Studio | Record Shop |
| 95 | East Williamsburg | Music Venue | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 96 | North Side | Record Shop | Nightclub | Music Venue | Rock Club | Recording Studio |
| 97 | South Side | Nightclub | Music Venue | Rock Club | Recording Studio | Record Shop |
| 110 | Roosevelt Island | Lounge | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 116 | Chelsea | Jazz Club | Nightclub | Lounge | Rock Club | Recording Studio |
| 128 | Financial District | Music Venue | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 129 | Astoria | Karaoke Bar | Lounge | Rock Club | Recording Studio | Record Shop |
| 142 | Maspeth | Recording Studio | Rock Club | Nightclub | Lounge | Record Shop |
| 143 | Ridgewood | Recording Studio | Record Shop | Lounge | Music Venue | Rock Club |
| 144 | Glendale | Karaoke Bar | Music Venue | Lounge | Rock Club | Recording Studio |
| 148 | South Ozone Park | Lounge | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 149 | College Point | Karaoke Bar | Nightclub | Music Venue | Lounge | Rock Club |
| 151 | Bayside | Karaoke Bar | Lounge | Music Venue | Rock Club | Recording Studio |
| 152 | Auburndale | Karaoke Bar | Rock Club | Music Venue | Lounge | Nightclub |
| 153 | Little Neck | Music Store | Lounge | Rock Club | Recording Studio | Record Shop |
| 154 | Douglaston | Music Store | Lounge | Rock Club | Recording Studio | Record Shop |
| 155 | Glen Oaks | Concert Hall | Nightclub | Rock Club | Recording Studio | Record Shop |

| | | | | | | |
|-----|---------------------|------------------|--------------|------------------|------------------|------------------|
| 157 | Kew Gardens Hills | Jazz Club | Lounge | Music Venue | Rock Club | Recording Studio |
| 161 | Oakland Gardens | Concert Hall | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 162 | Queens Village | Rock Club | Karaoke Bar | Music Venue | Lounge | Recording Studio |
| 165 | St. Albans | Lounge | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 166 | Rochdale | Recording Studio | Record Shop | Lounge | Rock Club | Piano Bar |
| 167 | Springfield Gardens | Recording Studio | Record Shop | Music Venue | Lounge | Rock Club |
| 169 | Rosedale | Music Venue | Lounge | Rock Club | Recording Studio | Record Shop |
| 170 | Far Rockaway | Karaoke Bar | Record Shop | Rock Club | Recording Studio | Piano Bar |
| 178 | Rockaway Beach | Nightclub | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 179 | Neponsit | Lounge | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 184 | Queensboro Hill | Karaoke Bar | Concert Hall | Nightclub | Lounge | Rock Club |
| 185 | Hillcrest | Karaoke Bar | Lounge | Nightclub | Rock Club | Recording Studio |
| 186 | Ravenswood | Karaoke Bar | Music Venue | Lounge | Rock Club | Recording Studio |
| 190 | Belle Harbor | Concert Hall | Lounge | Rock Club | Recording Studio | Record Shop |
| 193 | Brookville | Lounge | Music Venue | Rock Club | Recording Studio | Record Shop |
| 204 | South Beach | Karaoke Bar | Nightclub | Rock Club | Recording Studio | Record Shop |
| 205 | Port Richmond | Record Shop | Rock Club | Nightclub | Music Venue | Lounge |
| 206 | Mariner's Harbor | Record Shop | Nightclub | Rock Club | Recording Studio | Piano Bar |
| 212 | Oakwood | Nightclub | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 214 | Eltingville | Rock Club | Lounge | Recording Studio | Record Shop | Piano Bar |
| 217 | Tottenville | Rock Club | Nightclub | Lounge | Recording Studio | Record Shop |
| 226 | Graniteville | Nightclub | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 228 | Arrochar | Record Shop | Nightclub | Rock Club | Recording Studio | Piano Bar |
| 229 | Grasmere | Nightclub | Lounge | Rock Club | Recording Studio | Record Shop |
| 231 | Dongan Hills | Karaoke Bar | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 232 | Midland Beach | Karaoke Bar | Nightclub | Lounge | Rock Club | Recording Studio |
| 233 | Grant City | Karaoke Bar | Music Store | Nightclub | Lounge | Rock Club |
| 234 | New Dorp Beach | Karaoke Bar | Nightclub | Music Venue | Rock Club | Recording Studio |
| 237 | Pleasant Plains | Karaoke Bar | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 238 | Butler Manor | Nightclub | Lounge | Rock Club | Recording Studio | Record Shop |
| 239 | Charleston | Karaoke Bar | Nightclub | Music Venue | Lounge | Rock Club |
| 240 | Rossville | Rock Club | Nightclub | Music Venue | Lounge | Recording Studio |
| 241 | Arden Heights | Concert Hall | Lounge | Rock Club | Recording Studio | Record Shop |
| 242 | Greenridge | Rock Club | Lounge | Recording Studio | Record Shop | Piano Bar |
| 244 | Chelsea | Jazz Club | Nightclub | Lounge | Rock Club | Recording Studio |
| 246 | Bulls Head | Jazz Club | Music Store | Music Venue | Rock Club | Recording Studio |
| 249 | Civic Center | Karaoke Bar | Nightclub | Music Venue | Rock Club | Recording Studio |
| 251 | Richmond Town | Karaoke Bar | Music Venue | Rock Club | Recording Studio | Record Shop |
| 260 | New Lots | Karaoke Bar | Concert Hall | Music Venue | Lounge | Rock Club |
| 261 | Paerdegat Basin | Rock Club | Lounge | Nightclub | Music Venue | Recording Studio |
| 262 | Mill Basin | Jazz Club | Record Shop | Lounge | Rock Club | Recording Studio |
| 264 | Utopia | Music Store | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 266 | Astoria Heights | Karaoke Bar | Nightclub | Lounge | Music Venue | Rock Club |
| 271 | Sutton Place | Jazz Club | Karaoke Bar | Nightclub | Rock Club | Recording Studio |
| 273 | Turtle Bay | Jazz Club | Karaoke Bar | Music Venue | Rock Club | Recording Studio |

| | | | | | | |
|-----|-----------------|------------------|-------------|------------------|------------------|------------------|
| 274 | Tudor City | Karaoke Bar | Music Venue | Lounge | Rock Club | Recording Studio |
| 275 | Stuyvesant Town | Karaoke Bar | Music Venue | Rock Club | Recording Studio | Record Shop |
| 279 | Fulton Ferry | Recording Studio | Record Shop | Music Venue | Lounge | Rock Club |
| 284 | Manor Heights | Music Venue | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 285 | Willowbrook | Music Venue | Lounge | Rock Club | Recording Studio | Record Shop |
| 286 | Sandy Ground | Rock Club | Nightclub | Recording Studio | Record Shop | Piano Bar |
| 287 | Egbertville | Music Venue | Rock Club | Recording Studio | Record Shop | Piano Bar |
| 290 | Middle Village | Karaoke Bar | Lounge | Rock Club | Recording Studio | Record Shop |
| 292 | Lighthouse Hill | Karaoke Bar | Music Venue | Rock Club | Recording Studio | Record Shop |
| 293 | Richmond Valley | Nightclub | Lounge | Rock Club | Recording Studio | Record Shop |
| 302 | Hammels | Nightclub | Rock Club | Recording Studio | Record Shop | Piano Bar |

Cluster 13:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|----|--------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 78 | Coney Island | Music Festival | Karaoke Bar | Rock Club | Concert Hall | Music Venue |

Cluster 14:

| | Neighborhood | 1st Top Venue Category | 2nd Top Venue Category | 3rd Top Venue Category | 4th Top Venue Category | 5th Top Venue Category |
|-----|--------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 13 | Bedford Park | Nightclub | Record Shop | Concert Hall | Lounge | Music Venue |
| 14 | University Heights | Music Store | Lounge | Nightclub | Music Venue | Rock Club |
| 15 | Morris Heights | Karaoke Bar | Nightclub | Music Venue | Record Shop | Music Store |
| 19 | High Bridge | Lounge | Record Shop | Music Store | Rock Club | Music Venue |
| 43 | Concourse | Lounge | Record Shop | Rock Club | Nightclub | Music Venue |
| 56 | East Flatbush | Nightclub | Music Venue | Lounge | Concert Hall | Rock Club |
| 63 | Bedford Stuyvesant | Recording Studio | Music Venue | Lounge | Record Shop | Rock Club |
| 75 | Flatlands | Concert Hall | Nightclub | Music Venue | Lounge | Rock Club |
| 102 | Inwood | Lounge | Nightclub | Concert Hall | Rock Club | Recording Studio |
| 132 | Elmhurst | Nightclub | Music Store | Lounge | Music Venue | Rock Club |
| 160 | Jamaica Center | Music Store | Concert Hall | Nightclub | Record Shop | Karaoke Bar |
| 222 | Wingate | Music Store | Record Shop | Music Venue | Lounge | Nightclub |
| 223 | Rugby | Music Store | Lounge | Nightclub | Music Venue | Record Shop |
| 259 | Remsen Village | Music Store | Concert Hall | Lounge | Nightclub | Music Venue |
| 263 | Jamaica Hills | Jazz Club | Music Store | Concert Hall | Record Shop | Nightclub |
| 269 | Mount Eden | Nightclub | Record Shop | Music Store | Concert Hall | Lounge |
| 270 | Mount Hope | Nightclub | Music Venue | Music Store | Lounge | Concert Hall |
| 281 | Weeksville | Music Venue | Music Store | Concert Hall | Lounge | Nightclub |
| 300 | Erasmus | Lounge | Record Shop | Music Store | Concert Hall | Nightclub |