

# DP0701EN-3-3-2-Neighborhoods-New-York-py-v1.0

December 19, 2018

## Segmenting and Clustering Neighborhoods in New York City

### 0.1 Introduction

In this lab, you will learn how to convert addresses into their equivalent latitude and longitude values. Also, you will use the Foursquare API to explore neighborhoods in New York City. You will use the **explore** function to get the most common venue categories in each neighborhood, and then use this feature to group the neighborhoods into clusters. You will use the *k*-means clustering algorithm to complete this task. Finally, you will use the Folium library to visualize the neighborhoods in New York City and their emerging clusters.

### 0.2 Table of Contents

1. Download and Explore Dataset
2. Explore Neighborhoods in New York City
3. Analyze Each Neighborhood
4. Cluster Neighborhoods
5. Examine Clusters

Before we get the data and start exploring it, let's download all the dependencies that we will need.

```
In [1]: import numpy as np # library to handle data in a vectorized manner

import pandas as pd # library for data analysis
pd.set_option('display.max_columns', None)
pd.set_option('display.max_rows', None)

import json # library to handle JSON files

!conda install -c conda-forge geopy --yes # uncomment this line if you haven't completed
from geopy.geocoders import Nominatim # convert an address into latitude and longitude v

import requests # library to handle requests
```

```

from pandas.io.json import json_normalize # tranform JSON file into a pandas dataframe

# Matplotlib and associated plotting modules
import matplotlib.cm as cm
import matplotlib.colors as colors

# import k-means from clustering stage
from sklearn.cluster import KMeans

!conda install -c conda-forge folium=0.5.0 --yes # uncomment this line if you haven't co
import folium # map rendering library

print('Libraries imported.')

```

Solving environment: done

## Package Plan ##

environment location: /home/jupyterlab/conda

added / updated specs:

- geopy

The following packages will be downloaded:

package	build		
----- -----			
geopy-1.18.1	py_0	51 KB	conda-forge
conda-4.5.12	py36_1000	653 KB	conda-forge
geographiclib-1.49	py_0	32 KB	conda-forge
----- -----			
	Total:	737 KB	

The following NEW packages will be INSTALLED:

geographiclib:	1.49-py_0	conda-forge
geopy:	1.18.1-py_0	conda-forge

The following packages will be UPDATED:

conda:	4.5.12-py36_0	--> 4.5.12-py36_1000	conda-forge
--------	---------------	----------------------	-------------

Downloading and Extracting Packages

geopy-1.18.1	51 KB	#####	100%
conda-4.5.12	653 KB	#####	100%
geographiclib-1.49	32 KB	#####	100%

```
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
Solving environment: done
```

```
## Package Plan ##
```

```
environment location: /home/jupyterlab/conda
```

```
added / updated specs:
- folium=0.5.0
```

```
The following packages will be downloaded:
```

package	build		
vincent-0.4.4	py_1	28 KB	conda-forge
branca-0.3.1	py_0	25 KB	conda-forge
altair-2.3.0	py36_1001	533 KB	conda-forge
pandas-0.23.4	py36hf8a1672_0	27.8 MB	conda-forge
folium-0.5.0	py_0	45 KB	conda-forge
Total:		28.4 MB	

```
The following NEW packages will be INSTALLED:
```

altair:	2.3.0-py36_1001	conda-forge
branca:	0.3.1-py_0	conda-forge
folium:	0.5.0-py_0	conda-forge
vincent:	0.4.4-py_1	conda-forge

```
The following packages will be UPDATED:
```

pandas:	0.23.4-py37h04863e7_0	-->	0.23.4-py36hf8a1672_0	conda-forge
---------	-----------------------	-----	-----------------------	-------------

```
Downloading and Extracting Packages
```

vincent-0.4.4	28 KB	#####	100%
branca-0.3.1	25 KB	#####	100%
altair-2.3.0	533 KB	#####	100%
pandas-0.23.4	27.8 MB	#####	100%
folium-0.5.0	45 KB	#####	100%

```
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
Libraries imported.
```

### 0.3 1. Download and Explore Dataset

Neighborhood has a total of 5 boroughs and 306 neighborhoods. In order to segment the neighborhoods and explore them, we will essentially need a dataset that contains the 5 boroughs and the neighborhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood.

Luckily, this dataset exists for free on the web. Feel free to try to find this dataset on your own, but here is the link to the dataset: [https://geo.nyu.edu/catalog/nyu\\_2451\\_34572](https://geo.nyu.edu/catalog/nyu_2451_34572)

For your convenience, I downloaded the files and placed it on the server, so you can simply run a `wget` command and access the data. So let's go ahead and do that.

```
In [3]: !wget -q -O 'newyork_data.json' https://ibm.box.com/shared/static/fbpwbovar7lf8p5sgddm06
        print('Data downloaded!')
```

Data downloaded!

**Load and explore the data** Next, let's load the data.

```
In [4]: with open('newyork_data.json') as json_data:
        newyork_data = json.load(json_data)
```

Let's take a quick look at the data.

Notice how all the relevant data is in the *features* key, which is basically a list of the neighborhoods. So, let's define a new variable that includes this data.

```
In [5]: neighborhoods_data = newyork_data['features']
```

Let's take a look at the first item in this list.

```
In [6]: neighborhoods_data[0]
```

```
Out[6]: {'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]}}
```

**Transform the data into a *pandas* dataframe** The next task is essentially transforming this data of nested Python dictionaries into a *pandas* dataframe. So let's start by creating an empty dataframe.

```
In [7]: # define the dataframe columns
        column_names = ['Borough', 'Neighborhood', 'Latitude', 'Longitude']

        # instantiate the dataframe
        neighborhoods = pd.DataFrame(columns=column_names)
```

Take a look at the empty dataframe to confirm that the columns are as intended.

```
In [8]: neighborhoods
Out[8]: Empty DataFrame
        Columns: [Borough, Neighborhood, Latitude, Longitude]
        Index: []
```

Then let's loop through the data and fill the dataframe one row at a time.

```
In [9]: for data in neighborhoods_data:
        borough = neighborhood_name = data['properties']['borough']
        neighborhood_name = data['properties']['name']

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

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

Quickly examine the resulting dataframe.

```
In [10]: neighborhoods.head()
Out[10]:
```

	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

And make sure that the dataset has all 5 boroughs and 306 neighborhoods.

```
In [11]: print('The dataframe has {} boroughs and {} neighborhoods.'.format(
        len(neighborhoods['Borough'].unique()),
        neighborhoods.shape[0]
    ))
```

The dataframe has 5 boroughs and 306 neighborhoods.

**Use geopy library to get the latitude and longitude values of New York City.**

```
In [12]: address = 'New York City, NY'
```

```
geolocator = Nominatim()
location = geolocator.geocode(address)
latitude = location.latitude
longitude = location.longitude
print('The geograpical coordinate of New York City are {}, {}'.format(latitude, longitude))
```

```
/home/jupyterlab/conda/lib/python3.6/site-packages/ipykernel_launcher.py:3: DeprecationWarning:
  This is separate from the ipykernel package so we can avoid doing imports until
```

The geograpical coordinate of New York City are 40.7308619, -73.9871558.

**Create a map of New York with neighborhoods superimposed on top.**

```
In [13]: # create map of New York using latitude and longitude values
```

```
map_newyork = folium.Map(location=[latitude, longitude], zoom_start=10)
```

```
# add markers to map
```

```
for lat, lng, borough, neighborhood in zip(neighborhoods['Latitude'], neighborhoods['Longitude'],
                                             neighborhoods['Borough'], neighborhoods['Neighborhood']):
    label = '{} {}'.format(neighborhood, borough)
    popup = folium.Popup(label, parse_html=True)
    folium.CircleMarker(
        [lat, lng],
        radius=5,
        popup=popup,
        color='blue',
        fill=True,
        fill_color='#3186cc',
        fill_opacity=0.7,
        parse_html=False).add_to(map_newyork)
```

```
map_newyork
```

```
Out[13]: <folium.folium.Map at 0x7f38e29f59b0>
```

**Folium** is a great visualization library. Feel free to zoom into the above map, and click on each circle mark to reveal the name of the neighborhood and its respective borough.

However, for illustration purposes, let's simplify the above map and segment and cluster only the neighborhoods in Manhattan. So let's slice the original dataframe and create a new dataframe of the Manhattan data.

```
In [14]: manhattan_data = neighborhoods[neighborhoods['Borough'] == 'Manhattan'].reset_index(drop=True)
manhattan_data.head()
```

```
Out[14]:
```

	Borough	Neighborhood	Latitude	Longitude
0	Manhattan	Marble Hill	40.876551	-73.910660
1	Manhattan	Chinatown	40.715618	-73.994279
2	Manhattan	Washington Heights	40.851903	-73.936900
3	Manhattan	Inwood	40.867684	-73.921210
4	Manhattan	Hamilton Heights	40.823604	-73.949688

Let's get the geographical coordinates of Manhattan.

```
In [15]: address = 'Manhattan, NY'

geolocator = Nominatim()
location = geolocator.geocode(address)
latitude = location.latitude
longitude = location.longitude
print('The geograpical coordinate of Manhattan are {}, {}'.format(latitude, longitude))
```

```
/home/jupyterlab/conda/lib/python3.6/site-packages/ipykernel_launcher.py:3: DeprecationWarning:
This is separate from the ipykernel package so we can avoid doing imports until
```

The geograpical coordinate of Manhattan are 40.7900869, -73.9598295.

As we did with all of New York City, let's visualizat Manhattan the neighborhoods in it.

```
In [16]: # create map of Manhattan using latitude and longitude values
map_manhattan = folium.Map(location=[latitude, longitude], zoom_start=11)

# add markers to map
for lat, lng, label in zip(manhattan_data['Latitude'], manhattan_data['Longitude'], manhattan_data['Neighborhood']):
    label = folium.Popup(label, parse_html=True)
    folium.CircleMarker(
        [lat, lng],
        radius=5,
        popup=label,
        color='blue',
        fill=True,
        fill_color='#3186cc',
        fill_opacity=0.7,
        parse_html=False).add_to(map_manhattan)

map_manhattan
```

```
Out[16]: <folium.folium.Map at 0x7f38e1fe8c88>
```

Next, we are going to start utilizing the Foursquare API to explore the neighborhoods and segment them.

## Define Foursquare Credentials and Version

```
In [17]: CLIENT_ID = 'AUDP4MRVSHCP2RDWBPDWJSOSBUFMHCYPOMHYOW02ESKEBM4D' # your Foursquare ID
CLIENT_SECRET = 'QRDC34SWNOZARTH3I4MBOKPNIOYIPUAOYR01BILPQID3AIS1' # your Foursquare Secret
VERSION = '20180605' # Foursquare API version

print('Your credentials:')
print('CLIENT_ID: ' + CLIENT_ID)
print('CLIENT_SECRET: ' + CLIENT_SECRET)
```

Your credentials:

CLIENT\_ID: AUDP4MRVSHCP2RDWBPDWJSOSBUFMHCYPOMHYOW02ESKEBM4D

CLIENT\_SECRET: QRDC34SWNOZARTH3I4MBOKPNIOYIPUAOYR01BILPQID3AIS1

Let's explore the first neighborhood in our dataframe. Get the neighborhood's name.

```
In [18]: manhattan_data.loc[0, 'Neighborhood']
```

```
Out[18]: 'Marble Hill'
```

Get the neighborhood's latitude and longitude values.

```
In [19]: neighborhood_latitude = manhattan_data.loc[0, 'Latitude'] # neighborhood latitude value
neighborhood_longitude = manhattan_data.loc[0, 'Longitude'] # neighborhood longitude value

neighborhood_name = manhattan_data.loc[0, 'Neighborhood'] # neighborhood name

print('Latitude and longitude values of {} are {}, {}'.format(neighborhood_name,
                                                                neighborhood_latitude,
                                                                neighborhood_longitude))
```

Latitude and longitude values of Marble Hill are 40.87655077879964, -73.91065965862981.

Now, let's get the top 100 venues that are in Marble Hill within a radius of 500 meters. First, let's create the GET request URL. Name your URL `url`.

```
In [20]: # type your answer here
radius = 500
limit = 100

url = 'https://api.foursquare.com/v2/venues/explore?&client_id={}&client_secret={}&v={}&radius={}&limit={}&lat={}&lon={}'
CLIENT_ID, CLIENT_SECRET, VERSION, neighborhood_latitude, neighborhood_longitude, radius, limit
```

```
Out[20]: 'https://api.foursquare.com/v2/venues/explore?&client_id=AUDP4MRVSHCP2RDWBPDWJSOSBUFMHCYPOMHYOW02ESKEBM4D&client_secret=QRDC34SWNOZARTH3I4MBOKPNIOYIPUAOYR01BILPQID3AIS1&v=20180605&radius=500&limit=100&lat=40.87655077879964&lon=-73.91065965862981'
```

Double-click **here** for the solution.

Send the GET request and examine the results



```
In [23]: results = requests.get(url).json()
```

From the Foursquare lab in the previous module, we know that all the information is in the *items* key. Before we proceed, let's borrow the **get\_category\_type** function from the Foursquare lab.

```
In [24]: # function that extracts the category of the venue
def get_category_type(row):
    try:
        categories_list = row['categories']
    except:
        categories_list = row['venue.categories']

    if len(categories_list) == 0:
        return None
    else:
        return categories_list[0]['name']
```

Now we are ready to clean the json and structure it into a *pandas* dataframe.

```
In [25]: venues = results['response']['groups'][0]['items']

nearby_venues = json_normalize(venues) # flatten JSON

# filter columns
filtered_columns = ['venue.name', 'venue.categories', 'venue.location.lat', 'venue.location.lng']
nearby_venues = nearby_venues.loc[:, filtered_columns]

# filter the category for each row
nearby_venues['venue.categories'] = nearby_venues.apply(get_category_type, axis=1)

# clean columns
nearby_venues.columns = [col.split(".")[-1] for col in nearby_venues.columns]

nearby_venues.head()
```

```
Out[25]:
```

	name	categories	lat	lng
0	Arturo's	Pizza Place	40.874412	-73.910271
1	Bikram Yoga	Yoga Studio	40.876844	-73.906204
2	Tibbett Diner	Diner	40.880404	-73.908937
3	Starbucks	Coffee Shop	40.877531	-73.905582
4	Dunkin' Donuts	Donut Shop	40.876993	-73.906507

And how many venues were returned by Foursquare?

```
In [26]: print('{} venues were returned by Foursquare.'.format(nearby_venues.shape[0]))
```

23 venues were returned by Foursquare.

## 0.4 2. Explore Neighborhoods in Manhattan

Let's create a function to repeat the same process to all the neighborhoods in Manhattan

```
In [27]: def getNearbyVenues(names, latitudes, longitudes, radius=500, LIMIT=100):

    venues_list=[]
    for name, lat, lng in zip(names, latitudes, longitudes):
        print(name)

        # create the API request URL
        url = 'https://api.foursquare.com/v2/venues/explore?&client_id={}&client_secret={}&v={}&lat={}&lng={}&radius={}&limit={}&oauth_token={}'
        CLIENT_ID,
        CLIENT_SECRET,
        VERSION,
        lat,
        lng,
        radius,
        LIMIT)

        # make the GET request
        results = requests.get(url).json()["response"]["groups"][0]["items"]

        # return only relevant information for each nearby venue
        venues_list.append([(
            name,
            lat,
            lng,
            v['venue']['name'],
            v['venue']['location']['lat'],
            v['venue']['location']['lng'],
            v['venue']['categories'][0]['name']) for v in results])

    nearby_venues = pd.DataFrame([item for venue_list in venues_list for item in venue_list])
    nearby_venues.columns = ['Neighborhood',
                            'Neighborhood Latitude',
                            'Neighborhood Longitude',
                            'Venue',
                            'Venue Latitude',
                            'Venue Longitude',
                            'Venue Category']

    return(nearby_venues)
```

Now write the code to run the above function on each neighborhood and create a new dataframe called *manhattan\_venues*.

```
In [28]: # type your answer here
manhattan_venues = getNearbyVenues(names=manhattan_data['Neighborhood'],
```

```
latitudes=manhattan_data['Latitude'],  
longitudes=manhattan_data['Longitude']  
)
```

Marble Hill  
Chinatown  
Washington Heights  
Inwood  
Hamilton Heights  
Manhattanville  
Central Harlem  
East Harlem  
Upper East Side  
Yorkville  
Lenox Hill  
Roosevelt Island  
Upper West Side  
Lincoln Square  
Clinton  
Midtown  
Murray Hill  
Chelsea  
Greenwich Village  
East Village  
Lower East Side  
Tribeca  
Little Italy  
Soho  
West Village  
Manhattan Valley  
Morningside Heights  
Gramercy  
Battery Park City  
Financial District  
Carnegie Hill  
Noho  
Civic Center  
Midtown South  
Sutton Place  
Turtle Bay  
Tudor City  
Stuyvesant Town  
Flatiron  
Hudson Yards

Double-click **here** for the solution.

Let's check the size of the resulting dataframe

```
In [29]: print(manhattan_venues.shape)
manhattan_venues.head()
```

(3301, 7)

```
Out[29]:
```

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue \
0	Marble Hill	40.876551	-73.91066	Arturo's
1	Marble Hill	40.876551	-73.91066	Bikram Yoga
2	Marble Hill	40.876551	-73.91066	Tibbett Diner
3	Marble Hill	40.876551	-73.91066	Starbucks
4	Marble Hill	40.876551	-73.91066	Dunkin' Donuts

  

	Venue Latitude	Venue Longitude	Venue Category
0	40.874412	-73.910271	Pizza Place
1	40.876844	-73.906204	Yoga Studio
2	40.880404	-73.908937	Diner
3	40.877531	-73.905582	Coffee Shop
4	40.876993	-73.906507	Donut Shop

Let's check how many venues were returned for each neighborhood

```
In [30]: manhattan_venues.groupby('Neighborhood').count()
```

```
Out[30]:
```

	Neighborhood Latitude	Neighborhood Longitude	Venue \
Neighborhood			
Battery Park City	100	100	100
Carnegie Hill	100	100	100
Central Harlem	43	43	43
Chelsea	100	100	100
Chinatown	100	100	100
Civic Center	100	100	100
Clinton	100	100	100
East Harlem	44	44	44
East Village	100	100	100
Financial District	100	100	100
Flatiron	100	100	100
Gramercy	100	100	100
Greenwich Village	100	100	100
Hamilton Heights	58	58	58
Hudson Yards	61	61	61
Inwood	56	56	56
Lenox Hill	100	100	100
Lincoln Square	100	100	100
Little Italy	100	100	100
Lower East Side	59	59	59
Manhattan Valley	62	62	62

Manhattanville	39	39	39
Marble Hill	23	23	23
Midtown	100	100	100
Midtown South	100	100	100
Morningside Heights	45	45	45
Murray Hill	100	100	100
Noho	100	100	100
Roosevelt Island	26	26	26
Soho	100	100	100
Stuyvesant Town	17	17	17
Sutton Place	100	100	100
Tribeca	100	100	100
Tudor City	80	80	80
Turtle Bay	100	100	100
Upper East Side	100	100	100
Upper West Side	100	100	100
Washington Heights	88	88	88
West Village	100	100	100
Yorkville	100	100	100

	Venue Latitude	Venue Longitude	Venue Category
Neighborhood			
Battery Park City	100	100	100
Carnegie Hill	100	100	100
Central Harlem	43	43	43
Chelsea	100	100	100
Chinatown	100	100	100
Civic Center	100	100	100
Clinton	100	100	100
East Harlem	44	44	44
East Village	100	100	100
Financial District	100	100	100
Flatiron	100	100	100
Gramercy	100	100	100
Greenwich Village	100	100	100
Hamilton Heights	58	58	58
Hudson Yards	61	61	61
Inwood	56	56	56
Lenox Hill	100	100	100
Lincoln Square	100	100	100
Little Italy	100	100	100
Lower East Side	59	59	59
Manhattan Valley	62	62	62
Manhattanville	39	39	39
Marble Hill	23	23	23
Midtown	100	100	100
Midtown South	100	100	100
Morningside Heights	45	45	45

Murray Hill	100	100	100
Noho	100	100	100
Roosevelt Island	26	26	26
Soho	100	100	100
Stuyvesant Town	17	17	17
Sutton Place	100	100	100
Tribeca	100	100	100
Tudor City	80	80	80
Turtle Bay	100	100	100
Upper East Side	100	100	100
Upper West Side	100	100	100
Washington Heights	88	88	88
West Village	100	100	100
Yorkville	100	100	100

**Let's find out how many unique categories can be curated from all the returned venues**

```
In [31]: print('There are {} uniques categories.'.format(len(manhattan_venues['Venue Category'])).
```

There are 327 uniques categories.

## 0.5 3. Analyze Each Neighborhood

```
In [32]: # one hot encoding
manhattan_onehot = pd.get_dummies(manhattan_venues[['Venue Category']], prefix="", prefix_sep="")

# add neighborhood column back to dataframe
manhattan_onehot['Neighborhood'] = manhattan_venues['Neighborhood']

# move neighborhood column to the first column
fixed_columns = [manhattan_onehot.columns[-1]] + list(manhattan_onehot.columns[:-1])
manhattan_onehot = manhattan_onehot[fixed_columns]

manhattan_onehot.head()
```

```
Out[32]:
```

	Neighborhood	Accessories Store	Adult Boutique	Afghan Restaurant	\
0	Marble Hill	0	0	0	
1	Marble Hill	0	0	0	
2	Marble Hill	0	0	0	
3	Marble Hill	0	0	0	
4	Marble Hill	0	0	0	

  

	African Restaurant	American Restaurant	Animal Shelter	Antique Shop	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	

4	0	0	0	0			
	Arcade	Arepa Restaurant	Argentinian Restaurant	Art Gallery	Art Museum	\	
0	0	0	0	0	0		
1	0	0	0	0	0		
2	0	0	0	0	0		
3	0	0	0	0	0		
4	0	0	0	0	0		
	Arts & Crafts Store	Asian Restaurant	Athletics & Sports	Auditorium	\		
0		0	0	0	0		
1		0	0	0	0		
2		0	0	0	0		
3		0	0	0	0		
4		0	0	0	0		
	Australian Restaurant	Austrian Restaurant	Auto Workshop	BBQ Joint	\		
0		0	0	0	0		
1		0	0	0	0		
2		0	0	0	0		
3		0	0	0	0		
4		0	0	0	0		
	Baby Store	Bagel Shop	Bakery	Bank	Bar	Baseball Field	\
0	0	0	0	0	0	0	
1	0	0	0	0	0	0	
2	0	0	0	0	0	0	
3	0	0	0	0	0	0	
4	0	0	0	0	0	0	
	Basketball Court	Bed & Breakfast	Beer Bar	Beer Garden	Beer Store	\	
0		0	0	0	0	0	
1		0	0	0	0	0	
2		0	0	0	0	0	
3		0	0	0	0	0	
4		0	0	0	0	0	
	Belgian Restaurant	Bike Rental / Bike Share		Bike Shop	Bike Trail	\	
0		0	0	0	0	0	
1		0	0	0	0	0	
2		0	0	0	0	0	
3		0	0	0	0	0	
4		0	0	0	0	0	
	Bistro	Board Shop	Boat or Ferry	Bookstore	Boutique	Boxing Gym	\
0	0	0	0	0	0	0	
1	0	0	0	0	0	0	
2	0	0	0	0	0	0	

3	0	0	0	0	0	0
4	0	0	0	0	0	0

	Brazilian Restaurant	Breakfast Spot	Bridal Shop	Bubble Tea Shop	\
0	0	0	0	0	0
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0

	Building	Burger Joint	Burrito Place	Bus Line	Bus Station	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Business Service	Butcher	Cafeteria	Café	Cambodian Restaurant	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Camera Store	Candy Store	Caribbean Restaurant	Caucasian Restaurant	\
0	0	0	0	0	0
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0

	Cheese Shop	Chinese Restaurant	Chocolate Shop	Christmas Market	Church	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Climbing Gym	Clothing Store	Club House	Cocktail Bar	Coffee Shop	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	1	
4	0	0	0	0	0	

	College Academic Building	College Bookstore	College Cafeteria	\
0	0	0	0	
1	0	0	0	



2	0	0	0
3	0	0	0
4	0	0	0

	College Theater	Comedy Club	Community Center	Concert Hall	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Convenience Store	Cosmetics Shop	Coworking Space	Creperie	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Cuban Restaurant	Cultural Center	Cupcake Shop	Cycle Studio	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Czech Restaurant	Dance Studio	Daycare	Deli / Bodega	Department Store	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Design Studio	Dessert Shop	Dim Sum Restaurant	Diner	Discount Store	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	1	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Dive Bar	Dog Run	Donut Shop	Drugstore	Dry Cleaner	Dumpling Restaurant	\
0	0	0	0	0	0	0	
1	0	0	0	0	0	0	
2	0	0	0	0	0	0	
3	0	0	0	0	0	0	
4	0	0	1	0	0	0	

	Duty-free Shop	Eastern European Restaurant	Electronics Store	\
0	0	0	0	

1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0

	English Restaurant	Ethiopian Restaurant	Event Space	Exhibit \
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0

	Falafel Restaurant	Farmers Market	Fast Food Restaurant \
0	0	0	0
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0

	Filipino Restaurant	Fish Market	Flea Market	Flower Shop \
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0

	Food & Drink Shop	Food Court	Food Truck	Fountain	French Restaurant \
0	0	0	0	0	0
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0

	Fried Chicken Joint	Frozen Yogurt Shop	Furniture / Home Store \
0	0	0	0
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0

	Gaming Cafe	Garden	Garden Center	Gas Station	Gastropub	Gay Bar \
0	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0

	General College & University	General Entertainment	German Restaurant \
--	------------------------------	-----------------------	---------------------

0	0	0	0
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0

	Gift Shop	Golf Course	Gourmet Shop	Greek Restaurant	Grocery Store	Gym \
0	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0

	Gym / Fitness Center	Gym Pool	Gymnastics Gym	Harbor / Marina \
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0

	Hardware Store	Hawaiian Restaurant	Health & Beauty Service \
0	0	0	0
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0

	Health Food Store	Helipoint	High School	Historic Site	History Museum \
0	0	0	0	0	0
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0

	Hobby Shop	Hookah Bar	Hostel	Hot Dog Joint	Hotel	Hotel Bar \
0	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0

	Hotpot Restaurant	Ice Cream Shop	Indian Restaurant	Indie Movie Theater \
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0

	Indie Theater	Irish Pub	Israeli Restaurant	Italian Restaurant	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Japanese Curry Restaurant	Japanese Restaurant	Jazz Club	Jewelry Store	\
0		0	0	0	
1		0	0	0	
2		0	0	0	
3		0	0	0	
4		0	0	0	

	Jewish Restaurant	Juice Bar	Karaoke Bar	Kids Store	Korean Restaurant	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Kosher Restaurant	Latin American Restaurant	Laundry Service	\
0	0	0	0	
1	0	0	0	
2	0	0	0	
3	0	0	0	
4	0	0	0	

	Lebanese Restaurant	Library	Lingerie Store	Liquor Store	Lounge	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Malay Restaurant	Market	Martial Arts Dojo	Massage Studio	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Medical Center	Mediterranean Restaurant	Memorial Site	Men's Store	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Metro Station	Mexican Restaurant	Middle Eastern Restaurant	Mini Golf	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Miscellaneous Shop	Mobile Phone Shop	Modern European Restaurant	\
0	0	0	0	
1	0	0	0	
2	0	0	0	
3	0	0	0	
4	0	0	0	

	Molecular Gastronomy Restaurant	Monument / Landmark	Moroccan Restaurant	\
0	0	0	0	
1	0	0	0	
2	0	0	0	
3	0	0	0	
4	0	0	0	

	Movie Theater	Museum	Music School	Music Venue	Nail Salon	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	New American Restaurant	Newsstand	Nightclub	Non-Profit	Noodle House	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Office	Opera House	Optical Shop	Organic Grocery	Other Nightlife	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Outdoor Sculpture	Outdoors & Recreation	Paella Restaurant	\
0	0	0	0	
1	0	0	0	
2	0	0	0	
3	0	0	0	

4	0	0	0
---	---	---	---

	Pakistani Restaurant	Paper / Office Supplies Store	Park \
0	0	0	0
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0

	Performing Arts Venue	Persian Restaurant	Peruvian Restaurant	Pet Café \
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0

	Pet Service	Pet Store	Pharmacy	Piano Bar	Pie Shop	Pier \
0	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0

	Pilates Studio	Pizza Place	Playground	Plaza	Poke Place	Pool \
0	0	1	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0

	Portuguese Restaurant	Pub	Public Art	Ramen Restaurant	Record Shop \
0	0	0	0	0	0
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0

	Recreation Center	Rental Car Location \
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0

	Residential Building (Apartment / Condo)	Resort	Rest Area	Restaurant \
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0

3		0	0	0	0
4		0	0	0	0

	Rock Climbing Spot	Rock Club	Roof Deck	Russian Restaurant	Sake Bar	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Salad Place	Salon / Barbershop	Sandwich Place	Scenic Lookout	School	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Sculpture Garden	Seafood Restaurant	Shanghai Restaurant	Shipping Store	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Shoe Repair	Shoe Store	Shopping Mall	Skate Park	Skating Rink	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Smoke Shop	Snack Place	Soba Restaurant	Social Club	Soup Place	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	South American Restaurant	South Indian Restaurant	\
0	0	0	
1	0	0	
2	0	0	
3	0	0	
4	0	0	

	Southern / Soul Food Restaurant	Spa	Spanish Restaurant	Speakeasy	\
0	0	0	0	0	
1	0	0	0	0	

2		0	0		0	0
3		0	0		0	0
4		0	0		0	0

	Spiritual Center	Sporting Goods Shop	Sports Bar	Sports Club	Steakhouse	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Street Art	Strip Club	Supermarket	Supplement Shop	Sushi Restaurant	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Swiss Restaurant	Szechuan Restaurant	Taco Place	Tailor Shop	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Taiwanese Restaurant	Tapas Restaurant	Tattoo Parlor	Tea Room	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Tech Startup	Tennis Court	Tennis Stadium	Thai Restaurant	Theater	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Theme Park Ride / Attraction	Thrift / Vintage Store	Tibetan Restaurant	\
0	0	0	0	
1	0	0	0	
2	0	0	0	
3	0	0	0	
4	0	0	0	

	Tiki Bar	Tourist Information Center	Toy / Game Store	Track	Trail	Tree	\
0	0	0	0	0	0	0	



1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0

	Turkish Restaurant	Udon Restaurant	Used Bookstore	\
0	0	0	0	
1	0	0	0	
2	0	0	0	
3	0	0	0	
4	0	0	0	

	Vegetarian / Vegan Restaurant	Venezuelan Restaurant	Veterinarian	\
0	0	0	0	
1	0	0	0	
2	0	0	0	
3	0	0	0	
4	0	0	0	

	Video Game Store	Video Store	Vietnamese Restaurant	Volleyball Court	\
0	0	0	0	0	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	

	Watch Shop	Waterfront	Weight Loss Center	Whisky Bar	Wine Bar	\
0	0	0	0	0	0	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	0	0	
4	0	0	0	0	0	

	Wine Shop	Wings Joint	Women's Store	Yoga Studio
0	0	0	0	0
1	0	0	0	1
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0

And let's examine the new dataframe size.

In [33]: manhattan\_onehot.shape

Out[33]: (3301, 328)

Next, let's group rows by neighborhood and by taking the mean of the frequency of occurrence of each category

```
In [34]: manhattan_grouped = manhattan_onehot.groupby('Neighborhood').mean().reset_index()
manhattan_grouped
```

```
Out[34]:
```

	Neighborhood	Accessories Store	Adult Boutique	Afghan Restaurant	\
0	Battery Park City	0.000000	0.00	0.00	
1	Carnegie Hill	0.000000	0.00	0.00	
2	Central Harlem	0.000000	0.00	0.00	
3	Chelsea	0.000000	0.00	0.00	
4	Chinatown	0.000000	0.00	0.00	
5	Civic Center	0.000000	0.00	0.00	
6	Clinton	0.000000	0.00	0.00	
7	East Harlem	0.000000	0.00	0.00	
8	East Village	0.000000	0.00	0.00	
9	Financial District	0.010000	0.00	0.00	
10	Flatiron	0.000000	0.00	0.00	
11	Gramercy	0.000000	0.00	0.00	
12	Greenwich Village	0.000000	0.00	0.00	
13	Hamilton Heights	0.000000	0.00	0.00	
14	Hudson Yards	0.000000	0.00	0.00	
15	Inwood	0.000000	0.00	0.00	
16	Lenox Hill	0.000000	0.00	0.01	
17	Lincoln Square	0.010000	0.00	0.00	
18	Little Italy	0.000000	0.00	0.00	
19	Lower East Side	0.000000	0.00	0.00	
20	Manhattan Valley	0.000000	0.00	0.00	
21	Manhattanville	0.000000	0.00	0.00	
22	Marble Hill	0.000000	0.00	0.00	
23	Midtown	0.000000	0.00	0.00	
24	Midtown South	0.000000	0.00	0.00	
25	Morningside Heights	0.000000	0.00	0.00	
26	Murray Hill	0.000000	0.00	0.00	
27	Noho	0.000000	0.01	0.00	
28	Roosevelt Island	0.000000	0.00	0.00	
29	Soho	0.000000	0.00	0.00	
30	Stuyvesant Town	0.000000	0.00	0.00	
31	Sutton Place	0.000000	0.01	0.00	
32	Tribeca	0.000000	0.00	0.00	
33	Tudor City	0.000000	0.00	0.00	
34	Turtle Bay	0.000000	0.00	0.00	
35	Upper East Side	0.000000	0.00	0.00	
36	Upper West Side	0.010000	0.00	0.00	
37	Washington Heights	0.011364	0.00	0.00	
38	West Village	0.010000	0.00	0.00	
39	Yorkville	0.000000	0.00	0.00	

  

	African Restaurant	American Restaurant	Animal Shelter	Antique Shop	\
0	0.000000	0.010000	0.00	0.00	
1	0.000000	0.010000	0.00	0.00	

2	0.069767	0.046512	0.00	0.00
3	0.000000	0.030000	0.00	0.01
4	0.000000	0.040000	0.00	0.00
5	0.000000	0.020000	0.00	0.01
6	0.000000	0.040000	0.00	0.00
7	0.000000	0.000000	0.00	0.00
8	0.000000	0.020000	0.00	0.01
9	0.000000	0.020000	0.00	0.00
10	0.000000	0.040000	0.00	0.00
11	0.000000	0.030000	0.00	0.00
12	0.000000	0.020000	0.00	0.00
13	0.000000	0.000000	0.00	0.00
14	0.000000	0.049180	0.00	0.00
15	0.000000	0.035714	0.00	0.00
16	0.000000	0.000000	0.00	0.00
17	0.000000	0.020000	0.00	0.00
18	0.000000	0.010000	0.01	0.00
19	0.000000	0.000000	0.00	0.00
20	0.000000	0.000000	0.00	0.00
21	0.000000	0.025641	0.00	0.00
22	0.000000	0.043478	0.00	0.00
23	0.000000	0.030000	0.00	0.00
24	0.000000	0.020000	0.00	0.00
25	0.000000	0.066667	0.00	0.00
26	0.000000	0.020000	0.00	0.00
27	0.000000	0.030000	0.00	0.00
28	0.000000	0.000000	0.00	0.00
29	0.000000	0.020000	0.00	0.00
30	0.000000	0.000000	0.00	0.00
31	0.000000	0.030000	0.00	0.00
32	0.000000	0.060000	0.00	0.00
33	0.000000	0.012500	0.00	0.00
34	0.000000	0.020000	0.00	0.00
35	0.000000	0.020000	0.00	0.00
36	0.000000	0.020000	0.00	0.00
37	0.000000	0.011364	0.00	0.00
38	0.000000	0.030000	0.00	0.00
39	0.000000	0.000000	0.00	0.00

	Arcade	Arepa Restaurant	Argentinian Restaurant	Art Gallery	Art Museum \
0	0.00	0.000000	0.000000	0.000000	0.00
1	0.00	0.000000	0.010000	0.000000	0.02
2	0.00	0.000000	0.000000	0.046512	0.00
3	0.00	0.000000	0.000000	0.030000	0.00
4	0.00	0.000000	0.000000	0.000000	0.00
5	0.00	0.000000	0.000000	0.020000	0.01
6	0.00	0.000000	0.000000	0.000000	0.00
7	0.00	0.000000	0.000000	0.000000	0.00

8	0.00	0.020000	0.010000	0.000000	0.00
9	0.00	0.000000	0.000000	0.000000	0.00
10	0.00	0.000000	0.000000	0.000000	0.00
11	0.01	0.000000	0.000000	0.010000	0.00
12	0.00	0.000000	0.000000	0.010000	0.00
13	0.00	0.000000	0.000000	0.000000	0.00
14	0.00	0.000000	0.000000	0.032787	0.00
15	0.00	0.000000	0.000000	0.000000	0.00
16	0.00	0.000000	0.000000	0.020000	0.00
17	0.00	0.000000	0.000000	0.010000	0.00
18	0.00	0.000000	0.000000	0.010000	0.00
19	0.00	0.000000	0.016949	0.033898	0.00
20	0.00	0.000000	0.000000	0.000000	0.00
21	0.00	0.000000	0.000000	0.025641	0.00
22	0.00	0.000000	0.000000	0.000000	0.00
23	0.00	0.000000	0.000000	0.010000	0.00
24	0.00	0.000000	0.000000	0.000000	0.00
25	0.00	0.000000	0.000000	0.000000	0.00
26	0.00	0.000000	0.000000	0.000000	0.00
27	0.00	0.000000	0.000000	0.020000	0.00
28	0.00	0.000000	0.000000	0.000000	0.00
29	0.00	0.000000	0.000000	0.030000	0.01
30	0.00	0.000000	0.000000	0.000000	0.00
31	0.00	0.000000	0.000000	0.000000	0.00
32	0.00	0.000000	0.010000	0.020000	0.00
33	0.00	0.000000	0.000000	0.000000	0.00
34	0.00	0.000000	0.000000	0.000000	0.00
35	0.00	0.000000	0.000000	0.050000	0.01
36	0.00	0.000000	0.000000	0.000000	0.00
37	0.00	0.011364	0.000000	0.000000	0.00
38	0.00	0.000000	0.000000	0.010000	0.00
39	0.00	0.000000	0.000000	0.000000	0.00

	Arts & Crafts Store	Asian Restaurant	Athletics & Sports	Auditorium \
0	0.000000	0.000000	0.01	0.01
1	0.000000	0.000000	0.00	0.00
2	0.000000	0.000000	0.00	0.00
3	0.000000	0.020000	0.00	0.00
4	0.000000	0.020000	0.00	0.00
5	0.000000	0.010000	0.00	0.00
6	0.000000	0.000000	0.00	0.00
7	0.000000	0.000000	0.00	0.00
8	0.000000	0.000000	0.00	0.00
9	0.000000	0.010000	0.00	0.00
10	0.000000	0.000000	0.00	0.00
11	0.000000	0.000000	0.00	0.00
12	0.000000	0.000000	0.00	0.00
13	0.000000	0.000000	0.00	0.00

14	0.000000	0.000000	0.00	0.00
15	0.000000	0.000000	0.00	0.00
16	0.000000	0.000000	0.00	0.00
17	0.000000	0.000000	0.01	0.00
18	0.000000	0.010000	0.00	0.00
19	0.000000	0.000000	0.00	0.00
20	0.016129	0.000000	0.00	0.00
21	0.000000	0.025641	0.00	0.00
22	0.000000	0.000000	0.00	0.00
23	0.000000	0.000000	0.00	0.00
24	0.000000	0.000000	0.00	0.00
25	0.000000	0.000000	0.00	0.00
26	0.000000	0.000000	0.00	0.00
27	0.000000	0.010000	0.00	0.00
28	0.000000	0.000000	0.00	0.00
29	0.010000	0.000000	0.00	0.00
30	0.000000	0.000000	0.00	0.00
31	0.000000	0.000000	0.00	0.00
32	0.000000	0.000000	0.00	0.00
33	0.000000	0.025000	0.00	0.00
34	0.000000	0.010000	0.00	0.00
35	0.000000	0.000000	0.00	0.00
36	0.010000	0.010000	0.00	0.00
37	0.000000	0.000000	0.00	0.00
38	0.000000	0.000000	0.00	0.00
39	0.000000	0.010000	0.01	0.00

	Australian Restaurant	Austrian Restaurant	Auto Workshop	BBQ Joint	\
0	0.00	0.00	0.000000	0.020000	
1	0.00	0.00	0.000000	0.000000	
2	0.00	0.00	0.000000	0.023256	
3	0.00	0.00	0.000000	0.000000	
4	0.00	0.01	0.000000	0.000000	
5	0.01	0.00	0.000000	0.000000	
6	0.00	0.00	0.000000	0.000000	
7	0.00	0.00	0.000000	0.000000	
8	0.00	0.00	0.000000	0.000000	
9	0.00	0.00	0.000000	0.000000	
10	0.00	0.00	0.000000	0.000000	
11	0.00	0.00	0.000000	0.000000	
12	0.00	0.00	0.000000	0.010000	
13	0.00	0.00	0.000000	0.000000	
14	0.00	0.00	0.000000	0.000000	
15	0.00	0.00	0.000000	0.000000	
16	0.00	0.00	0.000000	0.010000	
17	0.00	0.00	0.000000	0.000000	
18	0.01	0.00	0.000000	0.000000	
19	0.00	0.00	0.016949	0.000000	

20	0.00	0.00	0.000000	0.000000
21	0.00	0.00	0.000000	0.025641
22	0.00	0.00	0.000000	0.000000
23	0.00	0.00	0.000000	0.000000
24	0.00	0.00	0.000000	0.000000
25	0.00	0.00	0.000000	0.000000
26	0.00	0.00	0.000000	0.000000
27	0.00	0.00	0.000000	0.000000
28	0.00	0.00	0.000000	0.000000
29	0.00	0.00	0.000000	0.000000
30	0.00	0.00	0.000000	0.000000
31	0.00	0.00	0.000000	0.000000
32	0.00	0.00	0.000000	0.000000
33	0.00	0.00	0.000000	0.000000
34	0.00	0.00	0.000000	0.000000
35	0.00	0.00	0.000000	0.000000
36	0.01	0.00	0.000000	0.000000
37	0.00	0.00	0.000000	0.000000
38	0.00	0.01	0.000000	0.000000
39	0.00	0.00	0.000000	0.000000

	Baby Store	Bagel Shop	Bakery	Bank	Bar	Baseball Field	\
0	0.00	0.000000	0.010000	0.000000	0.000000	0.000000	
1	0.00	0.010000	0.020000	0.000000	0.030000	0.000000	
2	0.00	0.023256	0.000000	0.000000	0.023256	0.000000	
3	0.00	0.010000	0.040000	0.000000	0.010000	0.000000	
4	0.00	0.000000	0.030000	0.000000	0.020000	0.000000	
5	0.01	0.010000	0.050000	0.000000	0.010000	0.000000	
6	0.00	0.000000	0.010000	0.000000	0.010000	0.000000	
7	0.00	0.000000	0.090909	0.000000	0.000000	0.000000	
8	0.00	0.020000	0.010000	0.000000	0.060000	0.000000	
9	0.00	0.010000	0.000000	0.000000	0.040000	0.000000	
10	0.00	0.000000	0.030000	0.000000	0.000000	0.000000	
11	0.00	0.040000	0.000000	0.000000	0.020000	0.000000	
12	0.00	0.010000	0.020000	0.000000	0.010000	0.000000	
13	0.00	0.000000	0.034483	0.017241	0.017241	0.000000	
14	0.00	0.000000	0.000000	0.000000	0.016393	0.000000	
15	0.00	0.000000	0.035714	0.000000	0.017857	0.000000	
16	0.00	0.010000	0.020000	0.010000	0.010000	0.000000	
17	0.00	0.010000	0.020000	0.000000	0.010000	0.000000	
18	0.00	0.010000	0.070000	0.000000	0.000000	0.000000	
19	0.00	0.016949	0.033898	0.000000	0.000000	0.000000	
20	0.00	0.000000	0.016129	0.000000	0.048387	0.000000	
21	0.00	0.000000	0.000000	0.000000	0.025641	0.000000	
22	0.00	0.000000	0.000000	0.043478	0.000000	0.000000	
23	0.00	0.000000	0.030000	0.000000	0.010000	0.000000	
24	0.00	0.000000	0.030000	0.000000	0.000000	0.000000	
25	0.00	0.000000	0.000000	0.000000	0.000000	0.000000	

26	0.00	0.020000	0.020000	0.000000	0.030000	0.000000
27	0.00	0.000000	0.010000	0.000000	0.000000	0.000000
28	0.00	0.000000	0.000000	0.000000	0.000000	0.000000
29	0.00	0.000000	0.020000	0.000000	0.000000	0.000000
30	0.00	0.000000	0.000000	0.000000	0.235294	0.058824
31	0.00	0.010000	0.030000	0.000000	0.020000	0.000000
32	0.00	0.000000	0.020000	0.000000	0.000000	0.000000
33	0.00	0.012500	0.000000	0.012500	0.000000	0.000000
34	0.00	0.000000	0.010000	0.000000	0.020000	0.000000
35	0.00	0.000000	0.040000	0.000000	0.010000	0.000000
36	0.00	0.010000	0.030000	0.000000	0.040000	0.000000
37	0.00	0.000000	0.045455	0.011364	0.011364	0.000000
38	0.00	0.000000	0.030000	0.000000	0.000000	0.000000
39	0.00	0.020000	0.020000	0.010000	0.060000	0.000000

	Basketball Court	Bed & Breakfast	Beer Bar	Beer Garden	Beer Store \
0	0.000000	0.00	0.000000	0.020000	0.00
1	0.000000	0.00	0.000000	0.000000	0.00
2	0.000000	0.00	0.023256	0.000000	0.00
3	0.000000	0.00	0.010000	0.000000	0.00
4	0.000000	0.00	0.000000	0.000000	0.00
5	0.000000	0.00	0.000000	0.000000	0.00
6	0.000000	0.00	0.000000	0.000000	0.00
7	0.000000	0.00	0.022727	0.000000	0.00
8	0.000000	0.00	0.000000	0.000000	0.01
9	0.000000	0.00	0.000000	0.000000	0.00
10	0.000000	0.00	0.000000	0.000000	0.00
11	0.000000	0.01	0.010000	0.000000	0.00
12	0.000000	0.00	0.010000	0.000000	0.00
13	0.000000	0.00	0.000000	0.000000	0.00
14	0.000000	0.00	0.000000	0.000000	0.00
15	0.000000	0.00	0.000000	0.000000	0.00
16	0.000000	0.00	0.000000	0.000000	0.00
17	0.000000	0.00	0.000000	0.000000	0.00
18	0.000000	0.00	0.000000	0.000000	0.00
19	0.000000	0.00	0.000000	0.000000	0.00
20	0.000000	0.00	0.000000	0.000000	0.00
21	0.000000	0.00	0.000000	0.025641	0.00
22	0.000000	0.00	0.000000	0.000000	0.00
23	0.000000	0.00	0.000000	0.000000	0.00
24	0.000000	0.00	0.000000	0.000000	0.00
25	0.000000	0.00	0.000000	0.000000	0.00
26	0.000000	0.00	0.000000	0.000000	0.00
27	0.000000	0.00	0.010000	0.000000	0.01
28	0.000000	0.00	0.000000	0.000000	0.00
29	0.000000	0.00	0.000000	0.000000	0.00
30	0.058824	0.00	0.000000	0.000000	0.00
31	0.000000	0.00	0.010000	0.020000	0.01

32	0.010000	0.00	0.000000	0.000000	0.00
33	0.000000	0.00	0.000000	0.000000	0.00
34	0.000000	0.00	0.000000	0.000000	0.00
35	0.000000	0.00	0.000000	0.000000	0.00
36	0.000000	0.00	0.000000	0.000000	0.01
37	0.000000	0.00	0.011364	0.000000	0.00
38	0.000000	0.00	0.010000	0.000000	0.00
39	0.000000	0.00	0.000000	0.000000	0.01

	Belgian Restaurant	Bike Rental / Bike Share	Bike Shop	Bike Trail \
0	0.00	0.000000	0.000000	0.000000
1	0.00	0.000000	0.000000	0.000000
2	0.00	0.000000	0.000000	0.000000
3	0.00	0.000000	0.000000	0.000000
4	0.00	0.000000	0.010000	0.000000
5	0.00	0.000000	0.000000	0.000000
6	0.00	0.000000	0.000000	0.000000
7	0.00	0.000000	0.000000	0.000000
8	0.00	0.000000	0.000000	0.000000
9	0.00	0.000000	0.000000	0.000000
10	0.00	0.000000	0.000000	0.000000
11	0.01	0.010000	0.000000	0.000000
12	0.00	0.000000	0.000000	0.000000
13	0.00	0.000000	0.000000	0.000000
14	0.00	0.000000	0.000000	0.000000
15	0.00	0.000000	0.000000	0.000000
16	0.00	0.000000	0.000000	0.000000
17	0.00	0.000000	0.000000	0.000000
18	0.00	0.000000	0.000000	0.000000
19	0.00	0.016949	0.000000	0.000000
20	0.00	0.000000	0.016129	0.000000
21	0.00	0.000000	0.000000	0.025641
22	0.00	0.000000	0.000000	0.000000
23	0.00	0.000000	0.000000	0.000000
24	0.00	0.000000	0.000000	0.000000
25	0.00	0.000000	0.000000	0.000000
26	0.00	0.000000	0.000000	0.000000
27	0.00	0.000000	0.000000	0.000000
28	0.00	0.000000	0.000000	0.000000
29	0.00	0.000000	0.000000	0.000000
30	0.00	0.000000	0.000000	0.000000
31	0.00	0.000000	0.000000	0.000000
32	0.00	0.010000	0.000000	0.000000
33	0.00	0.000000	0.000000	0.000000
34	0.00	0.000000	0.000000	0.000000
35	0.00	0.000000	0.000000	0.000000
36	0.00	0.000000	0.000000	0.000000
37	0.00	0.000000	0.000000	0.000000



38	0.00	0.010000	0.000000	0.000000
39	0.00	0.000000	0.000000	0.000000

	Bistro	Board Shop	Boat or Ferry	Bookstore	Boutique	Boxing Gym \
0	0.010000	0.00	0.020000	0.000000	0.000000	0.00
1	0.000000	0.00	0.000000	0.030000	0.000000	0.00
2	0.000000	0.00	0.000000	0.023256	0.023256	0.00
3	0.000000	0.00	0.000000	0.020000	0.000000	0.00
4	0.000000	0.00	0.000000	0.000000	0.000000	0.00
5	0.000000	0.00	0.000000	0.010000	0.010000	0.01
6	0.000000	0.00	0.000000	0.000000	0.000000	0.00
7	0.000000	0.00	0.000000	0.000000	0.000000	0.00
8	0.000000	0.00	0.000000	0.000000	0.000000	0.00
9	0.000000	0.00	0.000000	0.000000	0.000000	0.00
10	0.000000	0.00	0.000000	0.020000	0.000000	0.00
11	0.000000	0.00	0.000000	0.000000	0.000000	0.00
12	0.000000	0.00	0.000000	0.010000	0.030000	0.00
13	0.000000	0.00	0.000000	0.000000	0.000000	0.00
14	0.000000	0.00	0.000000	0.000000	0.000000	0.00
15	0.017857	0.00	0.000000	0.000000	0.000000	0.00
16	0.000000	0.00	0.000000	0.010000	0.000000	0.00
17	0.000000	0.00	0.000000	0.000000	0.000000	0.00
18	0.000000	0.00	0.000000	0.000000	0.020000	0.00
19	0.000000	0.00	0.000000	0.000000	0.000000	0.00
20	0.000000	0.00	0.000000	0.000000	0.000000	0.00
21	0.000000	0.00	0.000000	0.000000	0.000000	0.00
22	0.000000	0.00	0.000000	0.000000	0.000000	0.00
23	0.000000	0.00	0.000000	0.030000	0.000000	0.01
24	0.000000	0.00	0.000000	0.010000	0.020000	0.00
25	0.000000	0.00	0.000000	0.066667	0.000000	0.00
26	0.000000	0.00	0.000000	0.000000	0.000000	0.01
27	0.000000	0.00	0.000000	0.030000	0.020000	0.00
28	0.000000	0.00	0.000000	0.000000	0.000000	0.00
29	0.000000	0.00	0.000000	0.010000	0.070000	0.00
30	0.000000	0.00	0.058824	0.000000	0.000000	0.00
31	0.000000	0.00	0.000000	0.000000	0.020000	0.00
32	0.000000	0.00	0.000000	0.000000	0.030000	0.00
33	0.000000	0.00	0.000000	0.000000	0.000000	0.00
34	0.000000	0.00	0.000000	0.010000	0.000000	0.00
35	0.000000	0.00	0.000000	0.010000	0.030000	0.00
36	0.000000	0.00	0.000000	0.020000	0.000000	0.00
37	0.000000	0.00	0.000000	0.000000	0.000000	0.00
38	0.000000	0.01	0.000000	0.010000	0.010000	0.00
39	0.010000	0.00	0.000000	0.000000	0.000000	0.00

	Brazilian Restaurant	Breakfast Spot	Bridal Shop	Bubble Tea Shop \
0	0.00	0.000000	0.00	0.000000
1	0.00	0.010000	0.00	0.000000

2	0.00	0.000000	0.00	0.000000
3	0.00	0.010000	0.00	0.000000
4	0.00	0.000000	0.00	0.020000
5	0.00	0.000000	0.00	0.010000
6	0.00	0.000000	0.00	0.000000
7	0.00	0.000000	0.00	0.000000
8	0.00	0.000000	0.00	0.000000
9	0.00	0.000000	0.00	0.000000
10	0.00	0.000000	0.00	0.000000
11	0.00	0.000000	0.00	0.010000
12	0.00	0.000000	0.00	0.000000
13	0.00	0.000000	0.00	0.000000
14	0.00	0.000000	0.00	0.000000
15	0.00	0.000000	0.00	0.000000
16	0.00	0.000000	0.01	0.000000
17	0.00	0.000000	0.00	0.000000
18	0.00	0.010000	0.00	0.030000
19	0.00	0.000000	0.00	0.016949
20	0.00	0.000000	0.00	0.016129
21	0.00	0.000000	0.00	0.000000
22	0.00	0.000000	0.00	0.000000
23	0.01	0.000000	0.00	0.000000
24	0.00	0.000000	0.00	0.000000
25	0.00	0.000000	0.00	0.000000
26	0.00	0.000000	0.00	0.000000
27	0.00	0.000000	0.00	0.000000
28	0.00	0.000000	0.00	0.000000
29	0.00	0.000000	0.00	0.000000
30	0.00	0.000000	0.00	0.000000
31	0.00	0.000000	0.00	0.000000
32	0.00	0.000000	0.01	0.000000
33	0.00	0.000000	0.00	0.000000
34	0.00	0.000000	0.00	0.000000
35	0.00	0.000000	0.01	0.000000
36	0.00	0.020000	0.00	0.000000
37	0.00	0.011364	0.00	0.000000
38	0.01	0.010000	0.00	0.000000
39	0.00	0.000000	0.00	0.000000

	Building	Burger Joint	Burrito Place	Bus Line	Bus Station \
0	0.010000	0.020000	0.01	0.000000	0.000000
1	0.000000	0.010000	0.00	0.000000	0.000000
2	0.000000	0.000000	0.00	0.000000	0.000000
3	0.000000	0.010000	0.00	0.000000	0.000000
4	0.000000	0.000000	0.00	0.000000	0.000000
5	0.010000	0.000000	0.00	0.000000	0.000000
6	0.010000	0.010000	0.00	0.000000	0.000000
7	0.000000	0.000000	0.00	0.000000	0.000000

8	0.000000	0.010000	0.00	0.000000	0.000000
9	0.000000	0.010000	0.00	0.000000	0.000000
10	0.000000	0.020000	0.00	0.000000	0.000000
11	0.000000	0.000000	0.00	0.000000	0.000000
12	0.000000	0.020000	0.00	0.000000	0.000000
13	0.000000	0.017241	0.00	0.000000	0.000000
14	0.016393	0.016393	0.00	0.016393	0.016393
15	0.000000	0.000000	0.00	0.000000	0.017857
16	0.000000	0.030000	0.00	0.000000	0.000000
17	0.000000	0.010000	0.00	0.000000	0.000000
18	0.000000	0.000000	0.00	0.000000	0.000000
19	0.000000	0.000000	0.00	0.000000	0.000000
20	0.000000	0.000000	0.00	0.000000	0.000000
21	0.000000	0.000000	0.00	0.000000	0.025641
22	0.000000	0.000000	0.00	0.000000	0.000000
23	0.000000	0.000000	0.00	0.000000	0.000000
24	0.010000	0.010000	0.00	0.000000	0.000000
25	0.000000	0.044444	0.00	0.000000	0.000000
26	0.010000	0.030000	0.00	0.000000	0.000000
27	0.000000	0.000000	0.00	0.000000	0.000000
28	0.000000	0.000000	0.00	0.000000	0.038462
29	0.000000	0.000000	0.00	0.000000	0.000000
30	0.000000	0.000000	0.00	0.000000	0.000000
31	0.000000	0.000000	0.00	0.000000	0.000000
32	0.000000	0.010000	0.00	0.000000	0.000000
33	0.000000	0.025000	0.00	0.000000	0.000000
34	0.000000	0.000000	0.00	0.000000	0.000000
35	0.000000	0.010000	0.01	0.000000	0.000000
36	0.000000	0.020000	0.00	0.000000	0.000000
37	0.000000	0.011364	0.00	0.011364	0.000000
38	0.000000	0.010000	0.00	0.000000	0.000000
39	0.000000	0.010000	0.00	0.000000	0.000000

	Business Service	Butcher	Cafeteria	Café	Cambodian Restaurant \
0	0.00	0.000000	0.000000	0.000000	0.00
1	0.00	0.000000	0.000000	0.040000	0.00
2	0.00	0.000000	0.023256	0.023256	0.00
3	0.00	0.010000	0.000000	0.010000	0.00
4	0.00	0.000000	0.000000	0.000000	0.00
5	0.00	0.000000	0.000000	0.010000	0.00
6	0.00	0.000000	0.000000	0.010000	0.00
7	0.00	0.000000	0.000000	0.022727	0.00
8	0.00	0.000000	0.000000	0.010000	0.00
9	0.00	0.000000	0.000000	0.020000	0.00
10	0.00	0.000000	0.000000	0.010000	0.00
11	0.00	0.000000	0.000000	0.010000	0.00
12	0.00	0.000000	0.000000	0.030000	0.00
13	0.00	0.000000	0.000000	0.068966	0.00

14	0.00	0.000000	0.000000	0.049180	0.00
15	0.00	0.000000	0.000000	0.053571	0.00
16	0.00	0.000000	0.000000	0.020000	0.00
17	0.00	0.000000	0.000000	0.040000	0.00
18	0.00	0.000000	0.000000	0.040000	0.00
19	0.00	0.016949	0.000000	0.050847	0.00
20	0.00	0.000000	0.000000	0.032258	0.00
21	0.00	0.000000	0.000000	0.000000	0.00
22	0.00	0.000000	0.000000	0.000000	0.00
23	0.00	0.000000	0.000000	0.020000	0.00
24	0.00	0.000000	0.000000	0.010000	0.00
25	0.00	0.000000	0.000000	0.044444	0.00
26	0.00	0.000000	0.000000	0.020000	0.00
27	0.00	0.000000	0.000000	0.000000	0.00
28	0.00	0.000000	0.000000	0.000000	0.00
29	0.00	0.000000	0.000000	0.020000	0.00
30	0.00	0.000000	0.000000	0.000000	0.00
31	0.00	0.000000	0.000000	0.000000	0.01
32	0.00	0.000000	0.000000	0.040000	0.00
33	0.00	0.000000	0.000000	0.050000	0.00
34	0.01	0.000000	0.000000	0.030000	0.00
35	0.00	0.000000	0.000000	0.010000	0.00
36	0.00	0.000000	0.000000	0.010000	0.00
37	0.00	0.000000	0.000000	0.068182	0.00
38	0.00	0.000000	0.000000	0.010000	0.00
39	0.00	0.010000	0.000000	0.010000	0.00

	Camera Store	Candy Store	Caribbean Restaurant	Caucasian Restaurant \
0	0.00	0.01	0.000000	0.000000
1	0.00	0.00	0.000000	0.000000
2	0.00	0.00	0.023256	0.000000
3	0.00	0.00	0.000000	0.000000
4	0.00	0.00	0.000000	0.000000
5	0.01	0.00	0.000000	0.000000
6	0.00	0.00	0.010000	0.010000
7	0.00	0.00	0.000000	0.000000
8	0.00	0.00	0.010000	0.000000
9	0.00	0.00	0.000000	0.000000
10	0.01	0.00	0.000000	0.000000
11	0.00	0.00	0.000000	0.000000
12	0.00	0.00	0.020000	0.000000
13	0.00	0.00	0.034483	0.000000
14	0.00	0.00	0.016393	0.016393
15	0.00	0.00	0.017857	0.000000
16	0.00	0.00	0.000000	0.000000
17	0.00	0.00	0.000000	0.000000
18	0.00	0.00	0.000000	0.000000
19	0.00	0.00	0.000000	0.000000

20	0.00	0.00	0.016129	0.000000
21	0.00	0.00	0.000000	0.000000
22	0.00	0.00	0.000000	0.000000
23	0.00	0.00	0.000000	0.000000
24	0.00	0.00	0.000000	0.000000
25	0.00	0.00	0.000000	0.000000
26	0.00	0.00	0.000000	0.000000
27	0.00	0.01	0.000000	0.000000
28	0.00	0.00	0.000000	0.000000
29	0.00	0.01	0.000000	0.000000
30	0.00	0.00	0.000000	0.000000
31	0.00	0.01	0.000000	0.000000
32	0.00	0.00	0.000000	0.000000
33	0.00	0.00	0.000000	0.000000
34	0.00	0.00	0.000000	0.000000
35	0.00	0.00	0.000000	0.000000
36	0.00	0.00	0.000000	0.000000
37	0.00	0.00	0.022727	0.000000
38	0.00	0.01	0.000000	0.000000
39	0.00	0.00	0.000000	0.000000

	Cheese Shop	Chinese Restaurant	Chocolate Shop	Christmas Market	Church \
0	0.00	0.010000	0.00	0.00	0.00
1	0.00	0.000000	0.00	0.00	0.00
2	0.00	0.046512	0.00	0.00	0.00
3	0.00	0.000000	0.00	0.00	0.00
4	0.00	0.090000	0.00	0.00	0.00
5	0.00	0.000000	0.00	0.00	0.00
6	0.00	0.010000	0.00	0.00	0.00
7	0.00	0.022727	0.00	0.00	0.00
8	0.01	0.030000	0.00	0.00	0.00
9	0.00	0.000000	0.00	0.00	0.00
10	0.01	0.010000	0.00	0.00	0.00
11	0.02	0.000000	0.00	0.00	0.00
12	0.00	0.030000	0.00	0.00	0.00
13	0.00	0.034483	0.00	0.00	0.00
14	0.00	0.000000	0.00	0.00	0.00
15	0.00	0.035714	0.00	0.00	0.00
16	0.00	0.010000	0.00	0.00	0.00
17	0.00	0.010000	0.00	0.00	0.00
18	0.00	0.030000	0.01	0.00	0.00
19	0.00	0.033898	0.00	0.00	0.00
20	0.00	0.032258	0.00	0.00	0.00
21	0.00	0.051282	0.00	0.00	0.00
22	0.00	0.000000	0.00	0.00	0.00
23	0.00	0.020000	0.01	0.01	0.00
24	0.00	0.000000	0.00	0.00	0.00
25	0.00	0.022222	0.00	0.00	0.00

26	0.00	0.010000	0.00	0.00	0.00
27	0.00	0.000000	0.00	0.00	0.00
28	0.00	0.000000	0.00	0.00	0.00
29	0.00	0.000000	0.00	0.00	0.00
30	0.00	0.000000	0.00	0.00	0.00
31	0.00	0.010000	0.00	0.00	0.00
32	0.00	0.020000	0.00	0.00	0.00
33	0.00	0.000000	0.00	0.00	0.00
34	0.01	0.000000	0.00	0.00	0.01
35	0.00	0.010000	0.01	0.00	0.00
36	0.00	0.010000	0.00	0.00	0.00
37	0.00	0.022727	0.00	0.00	0.00
38	0.00	0.020000	0.00	0.00	0.00
39	0.00	0.020000	0.00	0.00	0.00

	Climbing Gym	Clothing Store	Club House	Cocktail Bar	Coffee Shop	\
0	0.000000	0.010000	0.00	0.000000	0.080000	
1	0.000000	0.010000	0.00	0.020000	0.050000	
2	0.000000	0.000000	0.00	0.000000	0.000000	
3	0.000000	0.000000	0.00	0.010000	0.060000	
4	0.000000	0.000000	0.00	0.050000	0.020000	
5	0.000000	0.010000	0.00	0.030000	0.030000	
6	0.000000	0.000000	0.00	0.010000	0.040000	
7	0.000000	0.022727	0.00	0.022727	0.022727	
8	0.000000	0.000000	0.00	0.040000	0.030000	
9	0.000000	0.000000	0.00	0.010000	0.100000	
10	0.000000	0.030000	0.00	0.000000	0.010000	
11	0.000000	0.000000	0.00	0.040000	0.030000	
12	0.000000	0.040000	0.00	0.020000	0.020000	
13	0.000000	0.000000	0.00	0.034483	0.068966	
14	0.000000	0.000000	0.00	0.000000	0.098361	
15	0.000000	0.000000	0.00	0.000000	0.017857	
16	0.000000	0.000000	0.01	0.020000	0.060000	
17	0.000000	0.000000	0.00	0.000000	0.020000	
18	0.000000	0.020000	0.00	0.030000	0.010000	
19	0.000000	0.016949	0.00	0.033898	0.050847	
20	0.000000	0.016129	0.00	0.000000	0.048387	
21	0.025641	0.000000	0.00	0.000000	0.025641	
22	0.000000	0.000000	0.00	0.000000	0.086957	
23	0.000000	0.030000	0.00	0.030000	0.040000	
24	0.000000	0.020000	0.00	0.030000	0.040000	
25	0.000000	0.000000	0.00	0.000000	0.111111	
26	0.000000	0.000000	0.00	0.010000	0.030000	
27	0.000000	0.000000	0.00	0.040000	0.030000	
28	0.000000	0.000000	0.00	0.000000	0.038462	
29	0.000000	0.100000	0.00	0.000000	0.020000	
30	0.000000	0.000000	0.00	0.058824	0.058824	
31	0.000000	0.000000	0.00	0.000000	0.010000	

32	0.000000	0.020000	0.00	0.020000	0.030000
33	0.000000	0.000000	0.00	0.000000	0.012500
34	0.000000	0.000000	0.00	0.010000	0.040000
35	0.000000	0.010000	0.00	0.030000	0.050000
36	0.000000	0.000000	0.00	0.000000	0.030000
37	0.000000	0.022727	0.00	0.011364	0.011364
38	0.000000	0.000000	0.00	0.010000	0.020000
39	0.000000	0.000000	0.00	0.000000	0.070000

	College Academic Building	College Bookstore	College Cafeteria \
0	0.00	0.00	0.000000
1	0.00	0.00	0.000000
2	0.00	0.00	0.000000
3	0.00	0.00	0.000000
4	0.00	0.00	0.000000
5	0.00	0.00	0.000000
6	0.00	0.00	0.000000
7	0.00	0.00	0.000000
8	0.00	0.00	0.000000
9	0.00	0.00	0.000000
10	0.00	0.00	0.000000
11	0.00	0.00	0.000000
12	0.00	0.00	0.000000
13	0.00	0.00	0.000000
14	0.00	0.00	0.000000
15	0.00	0.00	0.000000
16	0.01	0.00	0.000000
17	0.00	0.01	0.000000
18	0.00	0.00	0.000000
19	0.00	0.00	0.000000
20	0.00	0.00	0.000000
21	0.00	0.00	0.000000
22	0.00	0.00	0.000000
23	0.00	0.00	0.000000
24	0.00	0.00	0.000000
25	0.00	0.00	0.022222
26	0.00	0.00	0.000000
27	0.00	0.00	0.000000
28	0.00	0.00	0.000000
29	0.00	0.00	0.000000
30	0.00	0.00	0.000000
31	0.00	0.00	0.000000
32	0.00	0.00	0.000000
33	0.00	0.00	0.000000
34	0.00	0.00	0.000000
35	0.00	0.00	0.000000
36	0.00	0.00	0.000000
37	0.00	0.00	0.000000

38	0.00	0.00	0.000000
39	0.00	0.00	0.000000

	College Theater	Comedy Club	Community Center	Concert Hall \
0	0.00	0.000000	0.000000	0.000000
1	0.00	0.000000	0.010000	0.010000
2	0.00	0.000000	0.000000	0.000000
3	0.01	0.000000	0.000000	0.000000
4	0.00	0.000000	0.000000	0.000000
5	0.00	0.000000	0.000000	0.000000
6	0.00	0.010000	0.000000	0.010000
7	0.00	0.000000	0.000000	0.000000
8	0.00	0.000000	0.000000	0.000000
9	0.00	0.000000	0.000000	0.000000
10	0.00	0.000000	0.000000	0.000000
11	0.00	0.020000	0.000000	0.000000
12	0.00	0.000000	0.000000	0.000000
13	0.00	0.000000	0.000000	0.000000
14	0.00	0.016393	0.000000	0.016393
15	0.00	0.000000	0.000000	0.000000
16	0.00	0.000000	0.000000	0.000000
17	0.00	0.000000	0.000000	0.050000
18	0.00	0.000000	0.000000	0.000000
19	0.00	0.000000	0.016949	0.000000
20	0.00	0.000000	0.000000	0.000000
21	0.00	0.000000	0.000000	0.000000
22	0.00	0.000000	0.000000	0.000000
23	0.00	0.000000	0.000000	0.010000
24	0.00	0.000000	0.000000	0.000000
25	0.00	0.000000	0.000000	0.000000
26	0.00	0.000000	0.000000	0.000000
27	0.00	0.010000	0.000000	0.000000
28	0.00	0.000000	0.000000	0.000000
29	0.00	0.000000	0.000000	0.000000
30	0.00	0.000000	0.000000	0.000000
31	0.00	0.000000	0.000000	0.000000
32	0.00	0.000000	0.000000	0.000000
33	0.00	0.000000	0.000000	0.000000
34	0.00	0.000000	0.000000	0.000000
35	0.00	0.000000	0.000000	0.000000
36	0.00	0.000000	0.000000	0.000000
37	0.00	0.000000	0.000000	0.000000
38	0.00	0.000000	0.000000	0.000000
39	0.00	0.000000	0.000000	0.000000

	Convenience Store	Cosmetics Shop	Coworking Space	Creperie \
0	0.000000	0.010000	0.00	0.00
1	0.000000	0.050000	0.00	0.00



2	0.000000	0.046512	0.00	0.00
3	0.000000	0.000000	0.01	0.01
4	0.000000	0.010000	0.00	0.00
5	0.000000	0.010000	0.00	0.00
6	0.000000	0.000000	0.00	0.00
7	0.022727	0.000000	0.00	0.00
8	0.000000	0.000000	0.00	0.00
9	0.000000	0.000000	0.00	0.00
10	0.000000	0.030000	0.00	0.00
11	0.010000	0.000000	0.00	0.00
12	0.000000	0.020000	0.00	0.01
13	0.000000	0.017241	0.00	0.00
14	0.000000	0.000000	0.00	0.00
15	0.000000	0.000000	0.00	0.00
16	0.000000	0.020000	0.00	0.00
17	0.000000	0.020000	0.00	0.00
18	0.000000	0.010000	0.00	0.00
19	0.000000	0.000000	0.00	0.00
20	0.000000	0.016129	0.00	0.00
21	0.000000	0.000000	0.00	0.00
22	0.000000	0.000000	0.00	0.00
23	0.000000	0.020000	0.00	0.00
24	0.000000	0.040000	0.00	0.00
25	0.000000	0.000000	0.00	0.00
26	0.000000	0.000000	0.00	0.00
27	0.000000	0.000000	0.00	0.01
28	0.000000	0.038462	0.00	0.00
29	0.000000	0.000000	0.00	0.00
30	0.000000	0.000000	0.00	0.00
31	0.000000	0.010000	0.00	0.00
32	0.000000	0.000000	0.00	0.00
33	0.012500	0.000000	0.00	0.00
34	0.000000	0.000000	0.00	0.00
35	0.000000	0.010000	0.00	0.00
36	0.000000	0.030000	0.00	0.00
37	0.000000	0.011364	0.00	0.00
38	0.000000	0.050000	0.00	0.00
39	0.000000	0.000000	0.00	0.00

	Cuban Restaurant	Cultural Center	Cupcake Shop	Cycle Studio \
0	0.000000	0.00	0.02	0.000000
1	0.000000	0.00	0.00	0.000000
2	0.000000	0.00	0.00	0.023256
3	0.000000	0.00	0.02	0.010000
4	0.000000	0.00	0.00	0.000000
5	0.010000	0.00	0.00	0.000000
6	0.000000	0.00	0.00	0.000000
7	0.022727	0.00	0.00	0.000000

8	0.000000	0.00	0.01	0.000000
9	0.010000	0.00	0.00	0.010000
10	0.010000	0.00	0.00	0.030000
11	0.000000	0.00	0.01	0.000000
12	0.010000	0.00	0.00	0.000000
13	0.000000	0.00	0.00	0.000000
14	0.000000	0.00	0.00	0.000000
15	0.000000	0.00	0.00	0.000000
16	0.010000	0.00	0.00	0.020000
17	0.000000	0.00	0.00	0.020000
18	0.000000	0.00	0.00	0.010000
19	0.000000	0.00	0.00	0.000000
20	0.000000	0.00	0.00	0.000000
21	0.025641	0.00	0.00	0.000000
22	0.000000	0.00	0.00	0.000000
23	0.010000	0.00	0.00	0.020000
24	0.000000	0.00	0.01	0.000000
25	0.000000	0.00	0.00	0.000000
26	0.020000	0.01	0.01	0.000000
27	0.000000	0.00	0.00	0.000000
28	0.000000	0.00	0.00	0.000000
29	0.000000	0.00	0.01	0.010000
30	0.000000	0.00	0.00	0.000000
31	0.000000	0.00	0.02	0.010000
32	0.000000	0.00	0.00	0.010000
33	0.000000	0.00	0.00	0.000000
34	0.000000	0.00	0.00	0.000000
35	0.000000	0.00	0.00	0.010000
36	0.000000	0.00	0.01	0.000000
37	0.000000	0.00	0.00	0.000000
38	0.000000	0.00	0.00	0.000000
39	0.000000	0.00	0.00	0.000000

	Czech Restaurant	Dance Studio	Daycare	Deli / Bodega	Department Store \
0	0.00	0.000000	0.00	0.000000	0.010000
1	0.00	0.010000	0.00	0.000000	0.000000
2	0.00	0.000000	0.00	0.000000	0.000000
3	0.00	0.000000	0.00	0.000000	0.000000
4	0.00	0.000000	0.00	0.000000	0.000000
5	0.00	0.020000	0.00	0.010000	0.000000
6	0.00	0.000000	0.00	0.010000	0.000000
7	0.00	0.022727	0.00	0.068182	0.000000
8	0.00	0.000000	0.00	0.010000	0.000000
9	0.00	0.000000	0.00	0.010000	0.000000
10	0.00	0.000000	0.00	0.000000	0.000000
11	0.00	0.000000	0.00	0.010000	0.000000
12	0.00	0.000000	0.00	0.000000	0.000000
13	0.00	0.000000	0.00	0.034483	0.000000

14	0.00	0.000000	0.00	0.000000	0.000000
15	0.00	0.000000	0.00	0.035714	0.000000
16	0.01	0.000000	0.00	0.030000	0.000000
17	0.00	0.000000	0.00	0.000000	0.010000
18	0.00	0.000000	0.00	0.000000	0.000000
19	0.00	0.016949	0.00	0.000000	0.000000
20	0.00	0.000000	0.00	0.032258	0.000000
21	0.00	0.000000	0.00	0.076923	0.000000
22	0.00	0.000000	0.00	0.043478	0.043478
23	0.00	0.000000	0.00	0.010000	0.000000
24	0.00	0.000000	0.00	0.000000	0.010000
25	0.00	0.000000	0.00	0.044444	0.000000
26	0.00	0.000000	0.00	0.010000	0.000000
27	0.00	0.010000	0.00	0.020000	0.000000
28	0.00	0.000000	0.00	0.038462	0.000000
29	0.00	0.010000	0.00	0.000000	0.000000
30	0.00	0.000000	0.00	0.000000	0.000000
31	0.00	0.000000	0.00	0.010000	0.020000
32	0.00	0.000000	0.00	0.000000	0.000000
33	0.00	0.000000	0.00	0.037500	0.000000
34	0.00	0.000000	0.00	0.010000	0.000000
35	0.00	0.000000	0.00	0.000000	0.000000
36	0.00	0.010000	0.00	0.000000	0.000000
37	0.00	0.000000	0.00	0.022727	0.011364
38	0.00	0.000000	0.00	0.000000	0.000000
39	0.00	0.000000	0.01	0.030000	0.000000

	Design Studio	Dessert Shop	Dim Sum Restaurant	Diner	Discount Store \
0	0.00	0.000000		0.00 0.000000	0.000000
1	0.00	0.000000		0.00 0.000000	0.000000
2	0.00	0.023256		0.00 0.000000	0.000000
3	0.00	0.010000		0.00 0.000000	0.000000
4	0.00	0.010000		0.04 0.000000	0.000000
5	0.00	0.000000		0.00 0.010000	0.000000
6	0.00	0.000000		0.00 0.010000	0.000000
7	0.00	0.000000		0.00 0.000000	0.000000
8	0.00	0.010000		0.00 0.000000	0.000000
9	0.00	0.000000		0.00 0.000000	0.000000
10	0.00	0.020000		0.00 0.000000	0.000000
11	0.00	0.000000		0.00 0.010000	0.000000
12	0.00	0.020000		0.00 0.000000	0.000000
13	0.00	0.000000		0.00 0.000000	0.000000
14	0.00	0.000000		0.00 0.000000	0.000000
15	0.00	0.000000		0.00 0.017857	0.000000
16	0.00	0.010000		0.00 0.010000	0.000000
17	0.00	0.000000		0.00 0.000000	0.000000
18	0.01	0.010000		0.00 0.000000	0.000000
19	0.00	0.016949		0.00 0.016949	0.000000

20	0.00	0.000000	0.00	0.000000	0.000000
21	0.00	0.000000	0.00	0.025641	0.000000
22	0.00	0.000000	0.00	0.043478	0.086957
23	0.00	0.000000	0.00	0.000000	0.000000
24	0.00	0.020000	0.00	0.000000	0.000000
25	0.00	0.000000	0.00	0.000000	0.000000
26	0.00	0.000000	0.00	0.020000	0.000000
27	0.00	0.000000	0.00	0.000000	0.000000
28	0.00	0.000000	0.00	0.000000	0.000000
29	0.02	0.020000	0.00	0.000000	0.000000
30	0.00	0.000000	0.00	0.000000	0.000000
31	0.01	0.030000	0.00	0.000000	0.000000
32	0.00	0.000000	0.00	0.000000	0.000000
33	0.00	0.000000	0.00	0.037500	0.000000
34	0.00	0.000000	0.00	0.010000	0.000000
35	0.00	0.010000	0.00	0.010000	0.000000
36	0.00	0.020000	0.00	0.010000	0.000000
37	0.00	0.000000	0.00	0.011364	0.000000
38	0.00	0.000000	0.00	0.000000	0.000000
39	0.00	0.010000	0.00	0.020000	0.000000

	Dive Bar	Dog Run	Donut Shop	Drugstore	Dry Cleaner \
0	0.00	0.000000	0.000000	0.00	0.000000
1	0.00	0.000000	0.000000	0.00	0.000000
2	0.00	0.000000	0.000000	0.00	0.000000
3	0.00	0.000000	0.000000	0.00	0.000000
4	0.00	0.000000	0.000000	0.00	0.000000
5	0.00	0.000000	0.000000	0.00	0.000000
6	0.01	0.020000	0.000000	0.00	0.000000
7	0.00	0.000000	0.022727	0.00	0.000000
8	0.00	0.010000	0.000000	0.00	0.000000
9	0.00	0.000000	0.000000	0.00	0.000000
10	0.00	0.000000	0.010000	0.00	0.000000
11	0.00	0.000000	0.010000	0.00	0.000000
12	0.00	0.000000	0.000000	0.00	0.000000
13	0.00	0.000000	0.017241	0.00	0.000000
14	0.00	0.032787	0.000000	0.00	0.000000
15	0.00	0.017857	0.017857	0.00	0.000000
16	0.00	0.000000	0.000000	0.00	0.000000
17	0.00	0.010000	0.000000	0.00	0.000000
18	0.00	0.000000	0.000000	0.00	0.000000
19	0.00	0.000000	0.000000	0.00	0.000000
20	0.00	0.016129	0.000000	0.00	0.000000
21	0.00	0.000000	0.000000	0.00	0.000000
22	0.00	0.000000	0.043478	0.00	0.000000
23	0.00	0.000000	0.000000	0.00	0.000000
24	0.00	0.000000	0.000000	0.00	0.000000
25	0.00	0.000000	0.000000	0.00	0.000000

26	0.00	0.010000	0.000000	0.00	0.000000
27	0.00	0.000000	0.000000	0.00	0.000000
28	0.00	0.038462	0.000000	0.00	0.038462
29	0.00	0.000000	0.000000	0.00	0.000000
30	0.00	0.000000	0.000000	0.00	0.000000
31	0.00	0.000000	0.000000	0.00	0.000000
32	0.01	0.010000	0.000000	0.00	0.000000
33	0.00	0.037500	0.012500	0.00	0.000000
34	0.00	0.020000	0.000000	0.00	0.000000
35	0.00	0.000000	0.000000	0.00	0.000000
36	0.00	0.010000	0.000000	0.01	0.000000
37	0.00	0.000000	0.022727	0.00	0.000000
38	0.00	0.000000	0.000000	0.00	0.000000
39	0.00	0.010000	0.000000	0.00	0.000000

	Dumpling Restaurant	Duty-free Shop	Eastern European Restaurant	\
0	0.000000	0.00		0.00
1	0.000000	0.00		0.00
2	0.000000	0.00		0.00
3	0.000000	0.00		0.00
4	0.020000	0.00		0.00
5	0.000000	0.00		0.00
6	0.000000	0.00		0.00
7	0.000000	0.00		0.00
8	0.010000	0.00		0.00
9	0.000000	0.00		0.00
10	0.000000	0.00		0.00
11	0.000000	0.00		0.00
12	0.000000	0.00		0.01
13	0.000000	0.00		0.00
14	0.000000	0.00		0.00
15	0.000000	0.00		0.00
16	0.000000	0.00		0.00
17	0.000000	0.00		0.00
18	0.000000	0.00		0.00
19	0.000000	0.00		0.00
20	0.000000	0.00		0.00
21	0.025641	0.00		0.00
22	0.000000	0.00		0.00
23	0.000000	0.00		0.00
24	0.000000	0.00		0.00
25	0.000000	0.00		0.00
26	0.000000	0.00		0.00
27	0.000000	0.00		0.00
28	0.000000	0.00		0.00
29	0.000000	0.00		0.00
30	0.000000	0.00		0.00
31	0.000000	0.00		0.00

32	0.000000	0.00	0.00
33	0.000000	0.00	0.00
34	0.000000	0.01	0.00
35	0.000000	0.00	0.00
36	0.000000	0.00	0.00
37	0.000000	0.00	0.00
38	0.000000	0.00	0.00
39	0.000000	0.00	0.00

	Electronics Store	English Restaurant	Ethiopian Restaurant	Event Space \
0	0.01	0.00	0.000000	0.000000
1	0.00	0.00	0.000000	0.000000
2	0.00	0.00	0.023256	0.023256
3	0.01	0.00	0.000000	0.000000
4	0.00	0.01	0.000000	0.000000
5	0.00	0.00	0.000000	0.000000
6	0.00	0.00	0.010000	0.000000
7	0.00	0.00	0.000000	0.000000
8	0.00	0.00	0.000000	0.010000
9	0.00	0.00	0.000000	0.020000
10	0.00	0.00	0.000000	0.000000
11	0.00	0.00	0.000000	0.000000
12	0.03	0.00	0.000000	0.000000
13	0.00	0.00	0.000000	0.000000
14	0.00	0.00	0.000000	0.000000
15	0.00	0.00	0.000000	0.000000
16	0.00	0.00	0.000000	0.000000
17	0.01	0.00	0.000000	0.000000
18	0.00	0.00	0.000000	0.000000
19	0.00	0.00	0.000000	0.000000
20	0.00	0.00	0.016129	0.000000
21	0.00	0.00	0.000000	0.000000
22	0.00	0.00	0.000000	0.000000
23	0.00	0.00	0.000000	0.000000
24	0.00	0.00	0.000000	0.000000
25	0.00	0.00	0.022222	0.000000
26	0.00	0.00	0.000000	0.000000
27	0.00	0.00	0.000000	0.010000
28	0.00	0.00	0.000000	0.000000
29	0.01	0.00	0.000000	0.000000
30	0.00	0.00	0.000000	0.000000
31	0.00	0.00	0.000000	0.000000
32	0.00	0.00	0.000000	0.010000
33	0.00	0.00	0.000000	0.000000
34	0.00	0.00	0.000000	0.000000
35	0.01	0.00	0.000000	0.000000
36	0.00	0.00	0.000000	0.000000
37	0.00	0.00	0.000000	0.000000

38	0.00	0.00	0.010000	0.000000
39	0.00	0.00	0.000000	0.000000

	Exhibit	Falafel Restaurant	Farmers Market	Fast Food Restaurant	\
0	0.00	0.000000	0.000000	0.000000	
1	0.01	0.000000	0.000000	0.000000	
2	0.00	0.000000	0.000000	0.000000	
3	0.00	0.000000	0.000000	0.000000	
4	0.00	0.000000	0.000000	0.000000	
5	0.00	0.020000	0.010000	0.000000	
6	0.00	0.000000	0.000000	0.000000	
7	0.00	0.000000	0.000000	0.000000	
8	0.00	0.000000	0.010000	0.000000	
9	0.00	0.020000	0.010000	0.000000	
10	0.00	0.000000	0.000000	0.000000	
11	0.00	0.000000	0.000000	0.000000	
12	0.00	0.000000	0.000000	0.000000	
13	0.00	0.000000	0.000000	0.017241	
14	0.00	0.000000	0.000000	0.000000	
15	0.00	0.000000	0.017857	0.017857	
16	0.00	0.000000	0.000000	0.000000	
17	0.00	0.000000	0.000000	0.000000	
18	0.00	0.010000	0.000000	0.000000	
19	0.00	0.000000	0.000000	0.000000	
20	0.00	0.016129	0.016129	0.000000	
21	0.00	0.025641	0.000000	0.000000	
22	0.00	0.000000	0.000000	0.000000	
23	0.00	0.000000	0.000000	0.010000	
24	0.00	0.000000	0.000000	0.000000	
25	0.00	0.000000	0.022222	0.000000	
26	0.00	0.000000	0.000000	0.000000	
27	0.00	0.000000	0.000000	0.000000	
28	0.00	0.000000	0.038462	0.000000	
29	0.00	0.000000	0.000000	0.000000	
30	0.00	0.000000	0.058824	0.000000	
31	0.00	0.000000	0.000000	0.000000	
32	0.00	0.000000	0.000000	0.000000	
33	0.00	0.000000	0.000000	0.000000	
34	0.00	0.000000	0.010000	0.000000	
35	0.07	0.000000	0.000000	0.000000	
36	0.00	0.000000	0.000000	0.000000	
37	0.00	0.000000	0.000000	0.000000	
38	0.00	0.010000	0.000000	0.000000	
39	0.00	0.000000	0.010000	0.000000	

	Filipino Restaurant	Fish Market	Flea Market	Flower Shop	\
0	0.000000	0.00	0.00	0.00	
1	0.010000	0.00	0.00	0.01	

2	0.000000	0.00	0.00	0.00
3	0.000000	0.01	0.01	0.00
4	0.000000	0.00	0.00	0.00
5	0.000000	0.00	0.00	0.00
6	0.000000	0.00	0.00	0.00
7	0.000000	0.00	0.00	0.00
8	0.020000	0.00	0.00	0.01
9	0.000000	0.00	0.00	0.00
10	0.000000	0.00	0.00	0.00
11	0.010000	0.00	0.00	0.00
12	0.000000	0.00	0.00	0.00
13	0.000000	0.00	0.00	0.00
14	0.000000	0.00	0.00	0.00
15	0.000000	0.00	0.00	0.00
16	0.000000	0.00	0.00	0.00
17	0.000000	0.00	0.00	0.00
18	0.000000	0.00	0.01	0.00
19	0.016949	0.00	0.00	0.00
20	0.000000	0.00	0.00	0.00
21	0.000000	0.00	0.00	0.00
22	0.000000	0.00	0.00	0.00
23	0.000000	0.00	0.00	0.00
24	0.000000	0.00	0.00	0.01
25	0.000000	0.00	0.00	0.00
26	0.000000	0.00	0.00	0.00
27	0.000000	0.00	0.00	0.00
28	0.000000	0.00	0.00	0.00
29	0.000000	0.00	0.00	0.00
30	0.000000	0.00	0.00	0.00
31	0.000000	0.00	0.00	0.00
32	0.000000	0.00	0.00	0.00
33	0.000000	0.00	0.00	0.00
34	0.000000	0.00	0.00	0.00
35	0.000000	0.00	0.00	0.00
36	0.000000	0.00	0.00	0.01
37	0.000000	0.00	0.00	0.00
38	0.000000	0.00	0.00	0.00
39	0.000000	0.00	0.00	0.00

	Food & Drink Shop	Food Court	Food Truck	Fountain	French Restaurant \
0	0.000000	0.01	0.020000	0.02	0.000000
1	0.000000	0.00	0.010000	0.00	0.030000
2	0.000000	0.00	0.000000	0.00	0.046512
3	0.000000	0.00	0.000000	0.00	0.010000
4	0.000000	0.00	0.000000	0.00	0.000000
5	0.000000	0.00	0.000000	0.00	0.030000
6	0.000000	0.01	0.000000	0.00	0.020000
7	0.000000	0.00	0.000000	0.00	0.022727



8	0.000000	0.00	0.000000	0.00	0.000000
9	0.000000	0.01	0.030000	0.00	0.000000
10	0.000000	0.00	0.000000	0.00	0.010000
11	0.000000	0.00	0.010000	0.00	0.000000
12	0.000000	0.00	0.000000	0.00	0.040000
13	0.000000	0.00	0.000000	0.00	0.000000
14	0.000000	0.00	0.016393	0.00	0.000000
15	0.000000	0.00	0.000000	0.00	0.000000
16	0.000000	0.00	0.000000	0.00	0.010000
17	0.000000	0.00	0.020000	0.01	0.040000
18	0.000000	0.00	0.000000	0.00	0.020000
19	0.000000	0.00	0.000000	0.00	0.016949
20	0.000000	0.00	0.000000	0.00	0.016129
21	0.025641	0.00	0.000000	0.00	0.000000
22	0.000000	0.00	0.000000	0.00	0.000000
23	0.000000	0.00	0.020000	0.00	0.020000
24	0.000000	0.02	0.020000	0.00	0.000000
25	0.000000	0.00	0.044444	0.00	0.000000
26	0.000000	0.00	0.000000	0.00	0.030000
27	0.000000	0.00	0.000000	0.00	0.050000
28	0.000000	0.00	0.000000	0.00	0.000000
29	0.000000	0.00	0.000000	0.00	0.020000
30	0.000000	0.00	0.000000	0.00	0.000000
31	0.000000	0.00	0.000000	0.00	0.010000
32	0.000000	0.00	0.000000	0.00	0.020000
33	0.000000	0.00	0.000000	0.00	0.012500
34	0.000000	0.00	0.010000	0.00	0.030000
35	0.000000	0.00	0.000000	0.00	0.030000
36	0.010000	0.00	0.000000	0.00	0.020000
37	0.000000	0.00	0.000000	0.00	0.000000
38	0.010000	0.00	0.000000	0.00	0.030000
39	0.000000	0.00	0.000000	0.00	0.010000

	Fried Chicken Joint	Frozen Yogurt Shop	Furniture / Home Store \
0	0.000000	0.000000	0.000000
1	0.000000	0.000000	0.000000
2	0.023256	0.000000	0.000000
3	0.000000	0.000000	0.000000
4	0.000000	0.000000	0.020000
5	0.000000	0.000000	0.010000
6	0.010000	0.000000	0.000000
7	0.000000	0.000000	0.000000
8	0.000000	0.000000	0.000000
9	0.010000	0.000000	0.000000
10	0.000000	0.000000	0.020000
11	0.010000	0.000000	0.000000
12	0.000000	0.000000	0.000000
13	0.017241	0.000000	0.000000

14	0.000000	0.000000	0.000000
15	0.000000	0.035714	0.017857
16	0.000000	0.000000	0.000000
17	0.000000	0.000000	0.020000
18	0.000000	0.000000	0.020000
19	0.000000	0.000000	0.000000
20	0.016129	0.000000	0.016129
21	0.025641	0.000000	0.000000
22	0.000000	0.000000	0.000000
23	0.000000	0.000000	0.000000
24	0.020000	0.000000	0.000000
25	0.000000	0.000000	0.000000
26	0.010000	0.000000	0.010000
27	0.000000	0.000000	0.010000
28	0.000000	0.000000	0.000000
29	0.000000	0.000000	0.020000
30	0.000000	0.000000	0.000000
31	0.000000	0.010000	0.040000
32	0.000000	0.000000	0.010000
33	0.000000	0.012500	0.000000
34	0.000000	0.000000	0.000000
35	0.000000	0.000000	0.000000
36	0.000000	0.000000	0.000000
37	0.000000	0.011364	0.000000
38	0.000000	0.000000	0.000000
39	0.000000	0.000000	0.000000

	Gaming Cafe	Garden	Garden Center	Gas Station	Gastropub	Gay Bar \
0	0.00	0.010	0.00	0.000000	0.010000	0.00
1	0.00	0.000	0.00	0.000000	0.000000	0.01
2	0.00	0.000	0.00	0.000000	0.000000	0.00
3	0.00	0.000	0.00	0.000000	0.000000	0.00
4	0.00	0.000	0.01	0.000000	0.000000	0.00
5	0.00	0.000	0.00	0.000000	0.000000	0.00
6	0.00	0.000	0.00	0.000000	0.000000	0.00
7	0.00	0.000	0.00	0.000000	0.000000	0.00
8	0.00	0.000	0.00	0.000000	0.000000	0.00
9	0.00	0.000	0.00	0.000000	0.000000	0.00
10	0.00	0.000	0.00	0.000000	0.000000	0.00
11	0.00	0.000	0.00	0.000000	0.000000	0.00
12	0.01	0.000	0.00	0.000000	0.000000	0.00
13	0.00	0.000	0.00	0.000000	0.017241	0.00
14	0.00	0.000	0.00	0.000000	0.000000	0.00
15	0.00	0.000	0.00	0.000000	0.000000	0.00
16	0.00	0.000	0.00	0.000000	0.000000	0.00
17	0.00	0.000	0.00	0.000000	0.000000	0.00
18	0.00	0.010	0.00	0.000000	0.000000	0.00
19	0.00	0.000	0.00	0.000000	0.000000	0.00

20	0.00	0.000	0.00	0.000000	0.016129	0.00
21	0.00	0.000	0.00	0.000000	0.000000	0.00
22	0.00	0.000	0.00	0.000000	0.000000	0.00
23	0.00	0.000	0.00	0.000000	0.000000	0.00
24	0.00	0.000	0.00	0.000000	0.020000	0.00
25	0.00	0.000	0.00	0.000000	0.000000	0.00
26	0.00	0.000	0.00	0.000000	0.010000	0.00
27	0.00	0.020	0.00	0.000000	0.000000	0.00
28	0.00	0.000	0.00	0.000000	0.000000	0.00
29	0.00	0.000	0.00	0.000000	0.000000	0.00
30	0.00	0.000	0.00	0.058824	0.000000	0.00
31	0.00	0.000	0.00	0.000000	0.000000	0.00
32	0.00	0.000	0.00	0.000000	0.010000	0.00
33	0.00	0.025	0.00	0.000000	0.000000	0.00
34	0.00	0.010	0.00	0.000000	0.000000	0.00
35	0.00	0.000	0.00	0.000000	0.000000	0.00
36	0.00	0.010	0.00	0.000000	0.000000	0.00
37	0.00	0.000	0.00	0.000000	0.000000	0.00
38	0.00	0.010	0.00	0.000000	0.040000	0.02
39	0.00	0.000	0.00	0.000000	0.000000	0.00

	General College & University	General Entertainment	German Restaurant \
0	0.00	0.00	0.00
1	0.00	0.00	0.00
2	0.00	0.00	0.00
3	0.00	0.00	0.00
4	0.00	0.01	0.00
5	0.00	0.01	0.00
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	0.00	0.00	0.01
12	0.00	0.00	0.00
13	0.00	0.00	0.00
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00
19	0.00	0.00	0.00
20	0.00	0.00	0.00
21	0.00	0.00	0.00
22	0.00	0.00	0.00
23	0.01	0.00	0.00
24	0.00	0.00	0.00
25	0.00	0.00	0.00

26	0.00	0.00	0.00
27	0.00	0.00	0.00
28	0.00	0.00	0.00
29	0.00	0.00	0.00
30	0.00	0.00	0.00
31	0.00	0.00	0.00
32	0.00	0.00	0.00
33	0.00	0.00	0.00
34	0.00	0.00	0.01
35	0.00	0.00	0.00
36	0.00	0.00	0.00
37	0.00	0.00	0.00
38	0.00	0.00	0.00
39	0.00	0.00	0.01

	Gift Shop	Golf Course	Gourmet Shop	Greek Restaurant	Grocery Store \
0	0.00	0.00	0.01	0.000000	0.010000
1	0.00	0.00	0.01	0.000000	0.020000
2	0.00	0.00	0.00	0.000000	0.000000
3	0.02	0.00	0.00	0.000000	0.010000
4	0.01	0.00	0.00	0.010000	0.010000
5	0.00	0.00	0.01	0.000000	0.000000
6	0.01	0.00	0.00	0.000000	0.000000
7	0.00	0.00	0.00	0.000000	0.022727
8	0.01	0.00	0.01	0.010000	0.000000
9	0.00	0.00	0.00	0.010000	0.010000
10	0.01	0.00	0.01	0.000000	0.000000
11	0.00	0.00	0.00	0.000000	0.030000
12	0.00	0.00	0.02	0.000000	0.000000
13	0.00	0.00	0.00	0.000000	0.000000
14	0.00	0.00	0.00	0.000000	0.000000
15	0.00	0.00	0.00	0.000000	0.017857
16	0.01	0.00	0.01	0.010000	0.010000
17	0.01	0.00	0.00	0.000000	0.010000
18	0.01	0.00	0.01	0.000000	0.000000
19	0.00	0.00	0.00	0.000000	0.000000
20	0.00	0.00	0.00	0.000000	0.016129
21	0.00	0.00	0.00	0.000000	0.000000
22	0.00	0.00	0.00	0.000000	0.000000
23	0.00	0.00	0.01	0.010000	0.010000
24	0.01	0.01	0.00	0.000000	0.010000
25	0.00	0.00	0.00	0.022222	0.022222
26	0.00	0.00	0.00	0.000000	0.010000
27	0.03	0.00	0.01	0.010000	0.030000
28	0.00	0.00	0.00	0.038462	0.000000
29	0.01	0.00	0.01	0.000000	0.000000
30	0.00	0.00	0.00	0.000000	0.000000
31	0.00	0.00	0.01	0.010000	0.020000

32	0.00	0.00	0.00	0.030000	0.000000
33	0.00	0.00	0.00	0.050000	0.000000
34	0.01	0.00	0.00	0.020000	0.010000
35	0.00	0.00	0.01	0.000000	0.020000
36	0.00	0.00	0.00	0.000000	0.000000
37	0.00	0.00	0.00	0.000000	0.022727
38	0.00	0.00	0.02	0.000000	0.000000
39	0.00	0.00	0.01	0.000000	0.010000

	Gym	Gym / Fitness Center	Gym Pool	Gymnastics Gym	Harbor / Marina \
0	0.030000	0.010000	0.00	0.00	0.000000
1	0.030000	0.020000	0.00	0.00	0.000000
2	0.023256	0.023256	0.00	0.00	0.000000
3	0.010000	0.010000	0.00	0.00	0.000000
4	0.010000	0.000000	0.00	0.00	0.000000
5	0.030000	0.060000	0.00	0.00	0.000000
6	0.030000	0.040000	0.00	0.00	0.000000
7	0.022727	0.000000	0.00	0.00	0.000000
8	0.000000	0.000000	0.00	0.00	0.000000
9	0.040000	0.020000	0.00	0.00	0.000000
10	0.040000	0.040000	0.00	0.00	0.000000
11	0.000000	0.010000	0.00	0.00	0.000000
12	0.000000	0.000000	0.00	0.00	0.000000
13	0.000000	0.000000	0.00	0.00	0.000000
14	0.032787	0.049180	0.00	0.00	0.016393
15	0.000000	0.000000	0.00	0.00	0.000000
16	0.030000	0.040000	0.00	0.00	0.000000
17	0.020000	0.060000	0.00	0.00	0.000000
18	0.000000	0.000000	0.00	0.00	0.000000
19	0.000000	0.000000	0.00	0.00	0.000000
20	0.000000	0.000000	0.00	0.00	0.000000
21	0.000000	0.000000	0.00	0.00	0.000000
22	0.043478	0.000000	0.00	0.00	0.000000
23	0.020000	0.010000	0.00	0.00	0.000000
24	0.010000	0.030000	0.00	0.00	0.000000
25	0.000000	0.000000	0.00	0.00	0.000000
26	0.030000	0.030000	0.00	0.00	0.000000
27	0.010000	0.010000	0.00	0.00	0.000000
28	0.038462	0.000000	0.00	0.00	0.000000
29	0.000000	0.000000	0.00	0.00	0.000000
30	0.000000	0.000000	0.00	0.00	0.058824
31	0.020000	0.060000	0.00	0.00	0.000000
32	0.030000	0.010000	0.01	0.00	0.000000
33	0.012500	0.000000	0.00	0.00	0.000000
34	0.010000	0.000000	0.00	0.00	0.000000
35	0.000000	0.030000	0.00	0.00	0.000000
36	0.010000	0.020000	0.00	0.00	0.000000
37	0.022727	0.011364	0.00	0.00	0.000000

38	0.010000	0.010000	0.00	0.00	0.000000
39	0.060000	0.010000	0.00	0.01	0.000000

	Hardware Store	Hawaiian Restaurant	Health & Beauty Service \
0	0.00	0.000000	0.00
1	0.00	0.000000	0.00
2	0.00	0.000000	0.00
3	0.00	0.000000	0.02
4	0.00	0.000000	0.00
5	0.00	0.000000	0.01
6	0.00	0.000000	0.00
7	0.00	0.000000	0.00
8	0.00	0.000000	0.00
9	0.00	0.000000	0.00
10	0.00	0.000000	0.01
11	0.00	0.000000	0.00
12	0.00	0.000000	0.00
13	0.00	0.000000	0.00
14	0.00	0.000000	0.00
15	0.00	0.000000	0.00
16	0.00	0.000000	0.00
17	0.00	0.000000	0.00
18	0.00	0.000000	0.00
19	0.00	0.000000	0.00
20	0.00	0.016129	0.00
21	0.00	0.000000	0.00
22	0.00	0.000000	0.00
23	0.00	0.010000	0.00
24	0.00	0.000000	0.00
25	0.00	0.000000	0.00
26	0.00	0.010000	0.01
27	0.00	0.000000	0.00
28	0.00	0.000000	0.00
29	0.00	0.000000	0.00
30	0.00	0.000000	0.00
31	0.00	0.000000	0.01
32	0.00	0.000000	0.00
33	0.00	0.012500	0.00
34	0.00	0.000000	0.00
35	0.00	0.000000	0.00
36	0.00	0.000000	0.01
37	0.00	0.000000	0.00
38	0.01	0.000000	0.00
39	0.00	0.000000	0.01

	Health Food Store	Heliport	High School	Historic Site	History Museum \
0	0.000000	0.000000	0.00	0.010000	0.000000
1	0.000000	0.000000	0.00	0.000000	0.000000

2	0.000000	0.000000	0.00	0.000000	0.023256
3	0.000000	0.000000	0.00	0.000000	0.000000
4	0.000000	0.000000	0.00	0.010000	0.000000
5	0.000000	0.000000	0.00	0.000000	0.000000
6	0.010000	0.000000	0.00	0.000000	0.000000
7	0.000000	0.000000	0.00	0.022727	0.000000
8	0.000000	0.000000	0.00	0.000000	0.000000
9	0.000000	0.000000	0.00	0.010000	0.000000
10	0.000000	0.000000	0.00	0.000000	0.000000
11	0.000000	0.000000	0.00	0.000000	0.000000
12	0.000000	0.000000	0.00	0.000000	0.000000
13	0.000000	0.000000	0.00	0.000000	0.000000
14	0.016393	0.000000	0.00	0.000000	0.000000
15	0.000000	0.000000	0.00	0.000000	0.017857
16	0.010000	0.000000	0.00	0.000000	0.000000
17	0.000000	0.000000	0.01	0.000000	0.000000
18	0.000000	0.000000	0.00	0.000000	0.010000
19	0.000000	0.000000	0.00	0.000000	0.000000
20	0.016129	0.000000	0.00	0.000000	0.000000
21	0.000000	0.000000	0.00	0.000000	0.025641
22	0.000000	0.000000	0.00	0.000000	0.000000
23	0.000000	0.000000	0.00	0.010000	0.000000
24	0.000000	0.000000	0.00	0.000000	0.000000
25	0.000000	0.000000	0.00	0.000000	0.000000
26	0.000000	0.000000	0.00	0.000000	0.000000
27	0.000000	0.000000	0.00	0.000000	0.000000
28	0.000000	0.000000	0.00	0.000000	0.000000
29	0.000000	0.000000	0.00	0.000000	0.010000
30	0.000000	0.058824	0.00	0.000000	0.000000
31	0.000000	0.000000	0.00	0.000000	0.010000
32	0.000000	0.000000	0.01	0.000000	0.000000
33	0.000000	0.012500	0.00	0.000000	0.000000
34	0.010000	0.000000	0.00	0.000000	0.000000
35	0.000000	0.000000	0.00	0.000000	0.000000
36	0.000000	0.000000	0.00	0.010000	0.000000
37	0.000000	0.000000	0.00	0.000000	0.000000
38	0.000000	0.000000	0.00	0.000000	0.000000
39	0.000000	0.000000	0.00	0.000000	0.000000

	Hobby Shop	Hookah Bar	Hostel	Hot Dog	Joint	Hotel	Hotel Bar \
0	0.00	0.000000	0.000000		0.00	0.050000	0.010000
1	0.00	0.000000	0.000000		0.01	0.000000	0.000000
2	0.00	0.000000	0.000000		0.00	0.000000	0.000000
3	0.00	0.000000	0.000000		0.00	0.030000	0.000000
4	0.00	0.000000	0.000000		0.00	0.010000	0.000000
5	0.00	0.000000	0.000000		0.00	0.020000	0.010000
6	0.00	0.000000	0.000000		0.00	0.030000	0.010000
7	0.00	0.000000	0.000000		0.00	0.000000	0.000000

8	0.01	0.000000	0.000000	0.01	0.000000	0.000000
9	0.00	0.000000	0.000000	0.00	0.050000	0.000000
10	0.00	0.000000	0.000000	0.00	0.000000	0.000000
11	0.00	0.000000	0.000000	0.00	0.020000	0.010000
12	0.01	0.000000	0.000000	0.00	0.010000	0.000000
13	0.00	0.017241	0.000000	0.00	0.000000	0.000000
14	0.00	0.000000	0.000000	0.00	0.049180	0.016393
15	0.00	0.000000	0.000000	0.00	0.000000	0.000000
16	0.00	0.000000	0.000000	0.00	0.000000	0.000000
17	0.00	0.000000	0.000000	0.00	0.020000	0.000000
18	0.00	0.000000	0.000000	0.00	0.010000	0.000000
19	0.00	0.000000	0.000000	0.00	0.000000	0.000000
20	0.00	0.000000	0.016129	0.00	0.000000	0.000000
21	0.00	0.000000	0.000000	0.00	0.000000	0.000000
22	0.00	0.000000	0.000000	0.00	0.000000	0.000000
23	0.00	0.000000	0.000000	0.00	0.060000	0.000000
24	0.00	0.000000	0.000000	0.00	0.030000	0.040000
25	0.00	0.000000	0.000000	0.00	0.000000	0.000000
26	0.00	0.000000	0.000000	0.00	0.040000	0.000000
27	0.00	0.000000	0.000000	0.00	0.030000	0.010000
28	0.00	0.000000	0.000000	0.00	0.038462	0.000000
29	0.00	0.000000	0.000000	0.00	0.020000	0.010000
30	0.00	0.000000	0.000000	0.00	0.000000	0.000000
31	0.00	0.000000	0.000000	0.00	0.010000	0.000000
32	0.00	0.000000	0.000000	0.00	0.020000	0.000000
33	0.00	0.000000	0.000000	0.00	0.037500	0.000000
34	0.00	0.000000	0.000000	0.00	0.040000	0.000000
35	0.00	0.000000	0.000000	0.00	0.030000	0.010000
36	0.00	0.000000	0.000000	0.00	0.000000	0.000000
37	0.00	0.000000	0.000000	0.00	0.000000	0.000000
38	0.00	0.000000	0.000000	0.00	0.000000	0.000000
39	0.01	0.000000	0.000000	0.01	0.000000	0.000000

	Hotpot Restaurant	Ice Cream Shop	Indian Restaurant	Indie Movie Theater	\
0	0.00	0.020000	0.000000	0.00	
1	0.00	0.010000	0.000000	0.00	
2	0.00	0.000000	0.000000	0.00	
3	0.00	0.050000	0.010000	0.00	
4	0.03	0.030000	0.000000	0.01	
5	0.00	0.000000	0.010000	0.00	
6	0.00	0.010000	0.000000	0.00	
7	0.00	0.000000	0.000000	0.00	
8	0.00	0.070000	0.000000	0.00	
9	0.00	0.010000	0.010000	0.00	
10	0.00	0.010000	0.010000	0.00	
11	0.00	0.010000	0.000000	0.00	
12	0.00	0.010000	0.030000	0.01	
13	0.00	0.000000	0.034483	0.00	



14	0.00	0.000000	0.000000	0.00
15	0.00	0.000000	0.000000	0.00
16	0.00	0.000000	0.010000	0.00
17	0.00	0.000000	0.000000	0.03
18	0.00	0.030000	0.000000	0.00
19	0.00	0.016949	0.000000	0.00
20	0.00	0.016129	0.032258	0.00
21	0.00	0.000000	0.025641	0.00
22	0.00	0.043478	0.000000	0.00
23	0.00	0.000000	0.010000	0.00
24	0.00	0.000000	0.000000	0.00
25	0.00	0.022222	0.022222	0.00
26	0.00	0.000000	0.000000	0.00
27	0.00	0.010000	0.010000	0.01
28	0.00	0.000000	0.000000	0.00
29	0.00	0.000000	0.000000	0.00
30	0.00	0.000000	0.000000	0.00
31	0.00	0.020000	0.040000	0.00
32	0.00	0.000000	0.010000	0.01
33	0.00	0.000000	0.000000	0.00
34	0.00	0.000000	0.030000	0.00
35	0.00	0.000000	0.000000	0.00
36	0.00	0.020000	0.030000	0.00
37	0.00	0.000000	0.011364	0.00
38	0.00	0.010000	0.000000	0.00
39	0.00	0.020000	0.010000	0.00

	Indie Theater	Irish Pub	Israeli Restaurant	Italian Restaurant \
0	0.00	0.00	0.00	0.030000
1	0.00	0.00	0.00	0.020000
2	0.00	0.00	0.00	0.000000
3	0.01	0.00	0.01	0.060000
4	0.00	0.00	0.00	0.010000
5	0.00	0.00	0.00	0.050000
6	0.03	0.00	0.00	0.040000
7	0.00	0.00	0.00	0.000000
8	0.00	0.00	0.00	0.020000
9	0.00	0.00	0.00	0.030000
10	0.00	0.00	0.01	0.040000
11	0.00	0.01	0.01	0.060000
12	0.00	0.00	0.00	0.090000
13	0.00	0.00	0.00	0.017241
14	0.00	0.00	0.00	0.065574
15	0.00	0.00	0.00	0.000000
16	0.00	0.00	0.00	0.060000
17	0.01	0.00	0.00	0.050000
18	0.00	0.00	0.00	0.020000
19	0.00	0.00	0.00	0.016949

20	0.00	0.00	0.00	0.032258
21	0.00	0.00	0.00	0.051282
22	0.00	0.00	0.00	0.000000
23	0.00	0.00	0.00	0.000000
24	0.01	0.00	0.00	0.030000
25	0.00	0.00	0.00	0.000000
26	0.00	0.00	0.00	0.030000
27	0.00	0.00	0.00	0.070000
28	0.00	0.00	0.00	0.000000
29	0.00	0.00	0.00	0.030000
30	0.00	0.00	0.00	0.000000
31	0.00	0.00	0.00	0.060000
32	0.01	0.00	0.00	0.060000
33	0.00	0.00	0.00	0.012500
34	0.00	0.00	0.00	0.060000
35	0.00	0.00	0.00	0.070000
36	0.00	0.00	0.00	0.060000
37	0.00	0.00	0.00	0.011364
38	0.00	0.00	0.00	0.100000
39	0.00	0.00	0.00	0.040000

	Japanese Curry Restaurant	Japanese Restaurant	Jazz Club	Jewelry Store \
0	0.000000	0.000000	0.000000	0.00
1	0.000000	0.030000	0.000000	0.00
2	0.000000	0.000000	0.023256	0.00
3	0.000000	0.010000	0.000000	0.00
4	0.000000	0.000000	0.000000	0.01
5	0.000000	0.010000	0.000000	0.00
6	0.000000	0.000000	0.000000	0.00
7	0.000000	0.000000	0.000000	0.00
8	0.000000	0.020000	0.010000	0.00
9	0.010000	0.020000	0.000000	0.02
10	0.000000	0.030000	0.000000	0.00
11	0.000000	0.010000	0.000000	0.00
12	0.000000	0.000000	0.010000	0.00
13	0.000000	0.017241	0.000000	0.00
14	0.000000	0.000000	0.000000	0.00
15	0.000000	0.000000	0.000000	0.00
16	0.000000	0.010000	0.000000	0.00
17	0.000000	0.000000	0.000000	0.00
18	0.000000	0.020000	0.000000	0.01
19	0.000000	0.033898	0.000000	0.00
20	0.000000	0.016129	0.000000	0.00
21	0.025641	0.000000	0.000000	0.00
22	0.000000	0.000000	0.000000	0.00
23	0.000000	0.020000	0.000000	0.00
24	0.000000	0.030000	0.000000	0.00
25	0.000000	0.000000	0.000000	0.00

26	0.000000	0.030000	0.010000	0.00
27	0.000000	0.010000	0.000000	0.00
28	0.000000	0.038462	0.000000	0.00
29	0.000000	0.010000	0.000000	0.00
30	0.000000	0.000000	0.000000	0.00
31	0.000000	0.000000	0.000000	0.00
32	0.000000	0.000000	0.000000	0.00
33	0.000000	0.012500	0.000000	0.00
34	0.010000	0.030000	0.000000	0.00
35	0.000000	0.010000	0.010000	0.00
36	0.000000	0.010000	0.000000	0.00
37	0.000000	0.000000	0.000000	0.00
38	0.000000	0.020000	0.040000	0.00
39	0.000000	0.030000	0.000000	0.00

	Jewish Restaurant	Juice Bar	Karaoke Bar	Kids Store	Korean Restaurant	\
0	0.0000	0.010000	0.00	0.000000	0.000000	
1	0.0000	0.000000	0.01	0.000000	0.000000	
2	0.0000	0.023256	0.00	0.000000	0.000000	
3	0.0000	0.000000	0.00	0.000000	0.000000	
4	0.0000	0.000000	0.00	0.000000	0.000000	
5	0.0000	0.000000	0.00	0.010000	0.010000	
6	0.0000	0.010000	0.00	0.000000	0.000000	
7	0.0000	0.000000	0.00	0.000000	0.000000	
8	0.0000	0.010000	0.00	0.000000	0.020000	
9	0.0000	0.020000	0.00	0.000000	0.000000	
10	0.0000	0.020000	0.00	0.000000	0.000000	
11	0.0000	0.010000	0.00	0.000000	0.000000	
12	0.0000	0.000000	0.00	0.000000	0.000000	
13	0.0000	0.000000	0.00	0.000000	0.000000	
14	0.0000	0.000000	0.00	0.000000	0.000000	
15	0.0000	0.017857	0.00	0.000000	0.000000	
16	0.0000	0.010000	0.00	0.000000	0.000000	
17	0.0000	0.000000	0.00	0.000000	0.000000	
18	0.0000	0.000000	0.01	0.000000	0.000000	
19	0.0000	0.016949	0.00	0.000000	0.000000	
20	0.0000	0.016129	0.00	0.000000	0.016129	
21	0.0000	0.025641	0.00	0.000000	0.000000	
22	0.0000	0.000000	0.00	0.000000	0.000000	
23	0.0000	0.010000	0.00	0.000000	0.000000	
24	0.0000	0.000000	0.01	0.000000	0.170000	
25	0.0000	0.000000	0.00	0.000000	0.000000	
26	0.0200	0.020000	0.00	0.000000	0.000000	
27	0.0000	0.000000	0.00	0.000000	0.000000	
28	0.0000	0.000000	0.00	0.000000	0.000000	
29	0.0000	0.000000	0.01	0.000000	0.000000	
30	0.0000	0.000000	0.00	0.000000	0.000000	
31	0.0000	0.030000	0.00	0.000000	0.000000	

32	0.0000	0.000000	0.00	0.000000	0.010000
33	0.0125	0.000000	0.00	0.000000	0.000000
34	0.0000	0.000000	0.02	0.000000	0.000000
35	0.0000	0.030000	0.00	0.000000	0.000000
36	0.0000	0.010000	0.00	0.000000	0.000000
37	0.0000	0.000000	0.00	0.011364	0.000000
38	0.0000	0.000000	0.00	0.000000	0.010000
39	0.0000	0.000000	0.00	0.000000	0.000000

	Kosher Restaurant	Latin American Restaurant	Laundry Service	\
0	0.00	0.000000	0.00	
1	0.01	0.000000	0.00	
2	0.00	0.000000	0.00	
3	0.00	0.000000	0.00	
4	0.00	0.000000	0.00	
5	0.00	0.000000	0.01	
6	0.00	0.000000	0.00	
7	0.00	0.068182	0.00	
8	0.00	0.000000	0.00	
9	0.00	0.010000	0.00	
10	0.00	0.000000	0.00	
11	0.00	0.010000	0.00	
12	0.00	0.000000	0.00	
13	0.00	0.017241	0.00	
14	0.00	0.000000	0.00	
15	0.00	0.017857	0.00	
16	0.00	0.000000	0.00	
17	0.00	0.000000	0.00	
18	0.00	0.000000	0.00	
19	0.00	0.033898	0.00	
20	0.00	0.016129	0.00	
21	0.00	0.000000	0.00	
22	0.00	0.000000	0.00	
23	0.00	0.000000	0.00	
24	0.00	0.000000	0.00	
25	0.00	0.000000	0.00	
26	0.00	0.010000	0.00	
27	0.00	0.000000	0.00	
28	0.00	0.000000	0.00	
29	0.00	0.000000	0.00	
30	0.00	0.000000	0.00	
31	0.00	0.010000	0.00	
32	0.00	0.000000	0.00	
33	0.00	0.012500	0.00	
34	0.00	0.000000	0.00	
35	0.00	0.010000	0.00	
36	0.00	0.000000	0.00	
37	0.00	0.022727	0.00	

38	0.00	0.010000	0.00
39	0.00	0.010000	0.00

	Lebanese Restaurant	Library	Lingerie Store	Liquor Store	Lounge \
0	0.00	0.000000	0.0100	0.000000	0.000000
1	0.00	0.000000	0.0000	0.000000	0.000000
2	0.00	0.023256	0.0000	0.000000	0.000000
3	0.00	0.000000	0.0000	0.000000	0.000000
4	0.00	0.000000	0.0000	0.000000	0.000000
5	0.00	0.000000	0.0000	0.000000	0.000000
6	0.00	0.000000	0.0000	0.000000	0.010000
7	0.00	0.000000	0.0000	0.022727	0.000000
8	0.00	0.000000	0.0000	0.000000	0.000000
9	0.00	0.000000	0.0100	0.000000	0.000000
10	0.00	0.000000	0.0100	0.000000	0.000000
11	0.00	0.000000	0.0000	0.010000	0.000000
12	0.01	0.000000	0.0100	0.000000	0.000000
13	0.00	0.000000	0.0000	0.034483	0.000000
14	0.00	0.000000	0.0000	0.000000	0.000000
15	0.00	0.000000	0.0000	0.000000	0.071429
16	0.00	0.000000	0.0100	0.010000	0.000000
17	0.00	0.010000	0.0000	0.000000	0.000000
18	0.00	0.000000	0.0000	0.000000	0.000000
19	0.00	0.000000	0.0000	0.000000	0.000000
20	0.00	0.000000	0.0000	0.000000	0.000000
21	0.00	0.000000	0.0000	0.000000	0.025641
22	0.00	0.000000	0.0000	0.000000	0.000000
23	0.00	0.000000	0.0000	0.000000	0.000000
24	0.00	0.000000	0.0200	0.000000	0.000000
25	0.00	0.000000	0.0000	0.000000	0.000000
26	0.00	0.000000	0.0000	0.000000	0.010000
27	0.00	0.000000	0.0000	0.000000	0.010000
28	0.00	0.000000	0.0000	0.038462	0.000000
29	0.00	0.000000	0.0200	0.000000	0.000000
30	0.00	0.000000	0.0000	0.000000	0.000000
31	0.01	0.000000	0.0100	0.010000	0.000000
32	0.00	0.000000	0.0000	0.000000	0.000000
33	0.00	0.000000	0.0125	0.012500	0.012500
34	0.00	0.000000	0.0000	0.000000	0.010000
35	0.00	0.000000	0.0000	0.000000	0.000000
36	0.00	0.000000	0.0100	0.000000	0.000000
37	0.00	0.000000	0.0000	0.000000	0.011364
38	0.00	0.000000	0.0000	0.000000	0.010000
39	0.00	0.000000	0.0000	0.010000	0.010000

	Malay Restaurant	Market	Martial Arts Dojo	Massage Studio \
0	0.00	0.020000	0.0000	0.00
1	0.00	0.000000	0.0000	0.00

2	0.00	0.023256	0.0000	0.00
3	0.00	0.020000	0.0000	0.00
4	0.02	0.000000	0.0000	0.01
5	0.00	0.000000	0.0100	0.00
6	0.00	0.010000	0.0000	0.00
7	0.00	0.000000	0.0000	0.00
8	0.00	0.000000	0.0000	0.00
9	0.00	0.010000	0.0000	0.00
10	0.01	0.000000	0.0000	0.00
11	0.00	0.000000	0.0000	0.01
12	0.00	0.000000	0.0000	0.00
13	0.00	0.000000	0.0000	0.00
14	0.00	0.000000	0.0000	0.00
15	0.00	0.000000	0.0000	0.00
16	0.00	0.000000	0.0000	0.00
17	0.00	0.000000	0.0000	0.00
18	0.01	0.000000	0.0100	0.01
19	0.00	0.000000	0.0000	0.00
20	0.00	0.000000	0.0000	0.00
21	0.00	0.000000	0.0000	0.00
22	0.00	0.000000	0.0000	0.00
23	0.00	0.000000	0.0000	0.02
24	0.00	0.000000	0.0000	0.00
25	0.00	0.000000	0.0000	0.00
26	0.00	0.000000	0.0000	0.00
27	0.00	0.000000	0.0000	0.00
28	0.00	0.038462	0.0000	0.00
29	0.00	0.000000	0.0100	0.00
30	0.00	0.000000	0.0000	0.00
31	0.00	0.000000	0.0000	0.00
32	0.00	0.000000	0.0000	0.00
33	0.00	0.000000	0.0125	0.00
34	0.00	0.000000	0.0100	0.00
35	0.00	0.000000	0.0000	0.00
36	0.00	0.000000	0.0000	0.00
37	0.00	0.011364	0.0000	0.00
38	0.00	0.000000	0.0000	0.00
39	0.00	0.000000	0.0000	0.00

	Medical Center	Mediterranean Restaurant	Memorial Site	Men's Store \
0	0.00	0.000000	0.02	0.01
1	0.00	0.010000	0.00	0.00
2	0.00	0.000000	0.00	0.00
3	0.00	0.000000	0.00	0.02
4	0.00	0.000000	0.00	0.01
5	0.01	0.000000	0.00	0.00
6	0.00	0.020000	0.00	0.00
7	0.00	0.000000	0.00	0.00

8	0.00	0.000000	0.00	0.00
9	0.00	0.010000	0.00	0.00
10	0.00	0.020000	0.00	0.00
11	0.00	0.000000	0.00	0.00
12	0.00	0.010000	0.00	0.00
13	0.00	0.017241	0.00	0.00
14	0.00	0.000000	0.00	0.00
15	0.00	0.000000	0.00	0.00
16	0.00	0.000000	0.00	0.00
17	0.00	0.020000	0.00	0.00
18	0.00	0.020000	0.00	0.00
19	0.00	0.016949	0.00	0.00
20	0.00	0.000000	0.00	0.00
21	0.00	0.000000	0.00	0.00
22	0.00	0.000000	0.00	0.00
23	0.00	0.010000	0.00	0.01
24	0.00	0.000000	0.00	0.00
25	0.00	0.000000	0.00	0.00
26	0.00	0.020000	0.00	0.00
27	0.00	0.000000	0.00	0.00
28	0.00	0.000000	0.00	0.00
29	0.00	0.030000	0.00	0.04
30	0.00	0.000000	0.00	0.00
31	0.00	0.010000	0.00	0.00
32	0.00	0.000000	0.00	0.02
33	0.00	0.000000	0.00	0.00
34	0.00	0.000000	0.00	0.00
35	0.00	0.010000	0.00	0.00
36	0.00	0.010000	0.00	0.00
37	0.00	0.000000	0.00	0.00
38	0.00	0.010000	0.00	0.00
39	0.00	0.010000	0.00	0.00

	Metro Station	Mexican Restaurant	Middle Eastern Restaurant	Mini Golf \
0	0.000000	0.010000	0.000000	0.00
1	0.000000	0.020000	0.000000	0.00
2	0.000000	0.000000	0.000000	0.00
3	0.000000	0.010000	0.000000	0.00
4	0.000000	0.010000	0.000000	0.00
5	0.000000	0.010000	0.000000	0.00
6	0.000000	0.000000	0.000000	0.00
7	0.000000	0.136364	0.000000	0.00
8	0.000000	0.040000	0.010000	0.00
9	0.000000	0.010000	0.000000	0.00
10	0.000000	0.020000	0.000000	0.00
11	0.000000	0.030000	0.000000	0.00
12	0.000000	0.010000	0.010000	0.00
13	0.000000	0.086207	0.000000	0.00

14	0.000000	0.000000	0.000000	0.00
15	0.000000	0.071429	0.000000	0.00
16	0.000000	0.020000	0.010000	0.00
17	0.000000	0.010000	0.000000	0.00
18	0.000000	0.010000	0.010000	0.00
19	0.000000	0.016949	0.016949	0.00
20	0.000000	0.032258	0.000000	0.00
21	0.000000	0.051282	0.000000	0.00
22	0.000000	0.000000	0.000000	0.00
23	0.000000	0.000000	0.000000	0.00
24	0.000000	0.000000	0.000000	0.00
25	0.000000	0.000000	0.000000	0.00
26	0.000000	0.000000	0.000000	0.00
27	0.000000	0.030000	0.000000	0.00
28	0.038462	0.000000	0.000000	0.00
29	0.000000	0.010000	0.000000	0.00
30	0.000000	0.000000	0.000000	0.00
31	0.000000	0.020000	0.010000	0.00
32	0.000000	0.000000	0.000000	0.01
33	0.000000	0.050000	0.000000	0.00
34	0.000000	0.010000	0.000000	0.00
35	0.000000	0.010000	0.000000	0.00
36	0.000000	0.010000	0.020000	0.00
37	0.000000	0.022727	0.000000	0.00
38	0.000000	0.000000	0.000000	0.00
39	0.000000	0.030000	0.000000	0.00

	Miscellaneous Shop	Mobile Phone Shop	Modern European Restaurant	\
0	0.00	0.000000	0.00	
1	0.00	0.000000	0.00	
2	0.00	0.000000	0.00	
3	0.00	0.000000	0.00	
4	0.00	0.000000	0.00	
5	0.00	0.000000	0.00	
6	0.00	0.000000	0.00	
7	0.00	0.000000	0.00	
8	0.00	0.000000	0.00	
9	0.00	0.000000	0.00	
10	0.01	0.000000	0.00	
11	0.00	0.000000	0.00	
12	0.00	0.000000	0.00	
13	0.00	0.000000	0.00	
14	0.00	0.000000	0.00	
15	0.00	0.000000	0.00	
16	0.00	0.000000	0.00	
17	0.00	0.000000	0.00	
18	0.01	0.000000	0.00	
19	0.00	0.000000	0.00	



20	0.00	0.000000	0.00
21	0.00	0.000000	0.00
22	0.00	0.000000	0.00
23	0.01	0.000000	0.00
24	0.00	0.000000	0.00
25	0.00	0.000000	0.00
26	0.00	0.000000	0.00
27	0.00	0.000000	0.00
28	0.00	0.000000	0.00
29	0.01	0.000000	0.00
30	0.00	0.000000	0.00
31	0.00	0.000000	0.00
32	0.00	0.000000	0.01
33	0.00	0.000000	0.00
34	0.00	0.000000	0.00
35	0.00	0.000000	0.00
36	0.00	0.000000	0.00
37	0.00	0.034091	0.00
38	0.00	0.000000	0.00
39	0.00	0.000000	0.00

	Molecular Gastronomy Restaurant	Monument / Landmark	Moroccan Restaurant \
0	0.00	0.010000	0.00
1	0.00	0.000000	0.00
2	0.00	0.000000	0.00
3	0.00	0.000000	0.00
4	0.00	0.000000	0.00
5	0.01	0.010000	0.00
6	0.00	0.000000	0.00
7	0.00	0.000000	0.00
8	0.00	0.000000	0.01
9	0.00	0.020000	0.00
10	0.00	0.000000	0.00
11	0.00	0.000000	0.00
12	0.00	0.000000	0.00
13	0.00	0.017241	0.00
14	0.00	0.000000	0.00
15	0.00	0.000000	0.00
16	0.00	0.000000	0.00
17	0.00	0.000000	0.00
18	0.00	0.000000	0.00
19	0.00	0.000000	0.00
20	0.00	0.000000	0.00
21	0.00	0.000000	0.00
22	0.00	0.000000	0.00
23	0.00	0.000000	0.00
24	0.00	0.000000	0.00
25	0.00	0.022222	0.00

26	0.00	0.000000	0.00
27	0.00	0.000000	0.00
28	0.00	0.000000	0.00
29	0.00	0.000000	0.00
30	0.00	0.000000	0.00
31	0.00	0.000000	0.00
32	0.00	0.000000	0.00
33	0.00	0.000000	0.00
34	0.00	0.000000	0.00
35	0.00	0.000000	0.00
36	0.00	0.000000	0.00
37	0.00	0.000000	0.00
38	0.00	0.000000	0.01
39	0.00	0.010000	0.00

	Movie Theater	Museum	Music School	Music Venue	Nail Salon \
0	0.01	0.00	0.000000	0.000000	0.00
1	0.00	0.01	0.000000	0.000000	0.01
2	0.00	0.00	0.000000	0.023256	0.00
3	0.00	0.00	0.000000	0.000000	0.00
4	0.00	0.01	0.000000	0.010000	0.01
5	0.00	0.00	0.000000	0.000000	0.01
6	0.01	0.00	0.010000	0.000000	0.00
7	0.00	0.00	0.000000	0.000000	0.00
8	0.00	0.00	0.000000	0.000000	0.00
9	0.00	0.01	0.000000	0.000000	0.00
10	0.00	0.00	0.000000	0.000000	0.00
11	0.00	0.00	0.000000	0.010000	0.00
12	0.00	0.00	0.000000	0.000000	0.00
13	0.00	0.00	0.000000	0.000000	0.00
14	0.00	0.00	0.016393	0.000000	0.00
15	0.00	0.00	0.000000	0.000000	0.00
16	0.00	0.00	0.000000	0.000000	0.01
17	0.01	0.00	0.000000	0.000000	0.00
18	0.00	0.00	0.000000	0.000000	0.00
19	0.00	0.00	0.000000	0.016949	0.00
20	0.00	0.00	0.000000	0.000000	0.00
21	0.00	0.00	0.025641	0.000000	0.00
22	0.00	0.00	0.000000	0.000000	0.00
23	0.00	0.00	0.000000	0.000000	0.00
24	0.00	0.00	0.000000	0.000000	0.00
25	0.00	0.00	0.000000	0.000000	0.00
26	0.00	0.01	0.000000	0.000000	0.00
27	0.00	0.00	0.000000	0.010000	0.00
28	0.00	0.00	0.000000	0.000000	0.00
29	0.00	0.00	0.000000	0.000000	0.00
30	0.00	0.00	0.000000	0.000000	0.00
31	0.00	0.00	0.000000	0.000000	0.00

32	0.00	0.00	0.000000	0.010000	0.00
33	0.00	0.00	0.000000	0.000000	0.00
34	0.00	0.01	0.000000	0.000000	0.00
35	0.00	0.00	0.000000	0.000000	0.00
36	0.01	0.01	0.000000	0.000000	0.01
37	0.00	0.00	0.000000	0.000000	0.00
38	0.00	0.00	0.000000	0.000000	0.00
39	0.00	0.00	0.000000	0.000000	0.00

	New American Restaurant	Newsstand	Nightclub	Non-Profit	Noodle House \
0	0.000000	0.00	0.000000	0.00	0.00
1	0.010000	0.00	0.000000	0.00	0.00
2	0.000000	0.00	0.000000	0.00	0.00
3	0.010000	0.00	0.040000	0.00	0.01
4	0.010000	0.00	0.000000	0.00	0.03
5	0.010000	0.00	0.000000	0.00	0.00
6	0.020000	0.00	0.000000	0.00	0.01
7	0.000000	0.00	0.000000	0.00	0.00
8	0.000000	0.00	0.000000	0.00	0.00
9	0.010000	0.00	0.000000	0.00	0.00
10	0.030000	0.00	0.000000	0.00	0.00
11	0.000000	0.00	0.010000	0.00	0.00
12	0.010000	0.00	0.000000	0.00	0.00
13	0.000000	0.00	0.000000	0.00	0.00
14	0.000000	0.00	0.000000	0.00	0.00
15	0.000000	0.00	0.000000	0.00	0.00
16	0.000000	0.00	0.000000	0.01	0.00
17	0.000000	0.00	0.000000	0.00	0.00
18	0.000000	0.01	0.000000	0.00	0.01
19	0.000000	0.00	0.016949	0.00	0.00
20	0.000000	0.00	0.000000	0.00	0.00
21	0.000000	0.00	0.000000	0.00	0.00
22	0.000000	0.00	0.000000	0.00	0.00
23	0.010000	0.00	0.000000	0.00	0.00
24	0.010000	0.00	0.000000	0.00	0.00
25	0.022222	0.00	0.000000	0.00	0.00
26	0.010000	0.00	0.000000	0.00	0.00
27	0.010000	0.00	0.000000	0.00	0.00
28	0.000000	0.00	0.000000	0.00	0.00
29	0.000000	0.00	0.000000	0.00	0.00
30	0.000000	0.00	0.000000	0.00	0.00
31	0.000000	0.00	0.000000	0.00	0.00
32	0.010000	0.00	0.000000	0.00	0.00
33	0.000000	0.00	0.000000	0.00	0.00
34	0.000000	0.00	0.000000	0.00	0.03
35	0.000000	0.00	0.000000	0.00	0.00
36	0.010000	0.00	0.000000	0.00	0.00
37	0.011364	0.00	0.000000	0.00	0.00

38	0.050000	0.01	0.000000	0.00	0.00
39	0.010000	0.00	0.000000	0.00	0.00

	Office	Opera House	Optical Shop	Organic Grocery	Other Nightlife \
0	0.00	0.00	0.00	0.00	0.000000
1	0.00	0.00	0.00	0.00	0.000000
2	0.00	0.00	0.00	0.00	0.000000
3	0.01	0.00	0.00	0.00	0.000000
4	0.00	0.00	0.02	0.01	0.000000
5	0.00	0.00	0.00	0.00	0.000000
6	0.00	0.00	0.00	0.00	0.000000
7	0.00	0.00	0.00	0.00	0.000000
8	0.00	0.00	0.00	0.01	0.000000
9	0.00	0.00	0.00	0.00	0.000000
10	0.00	0.00	0.00	0.00	0.000000
11	0.00	0.00	0.01	0.00	0.000000
12	0.00	0.00	0.01	0.00	0.000000
13	0.00	0.00	0.00	0.00	0.000000
14	0.00	0.00	0.00	0.00	0.000000
15	0.00	0.00	0.00	0.00	0.000000
16	0.00	0.00	0.00	0.00	0.000000
17	0.00	0.03	0.00	0.00	0.000000
18	0.00	0.00	0.00	0.00	0.000000
19	0.00	0.00	0.00	0.00	0.000000
20	0.00	0.00	0.00	0.00	0.000000
21	0.00	0.00	0.00	0.00	0.025641
22	0.00	0.00	0.00	0.00	0.000000
23	0.00	0.00	0.01	0.00	0.000000
24	0.00	0.00	0.00	0.00	0.000000
25	0.00	0.00	0.00	0.00	0.000000
26	0.00	0.00	0.00	0.00	0.000000
27	0.00	0.00	0.00	0.00	0.000000
28	0.00	0.00	0.00	0.00	0.000000
29	0.00	0.00	0.01	0.00	0.000000
30	0.00	0.00	0.00	0.00	0.000000
31	0.00	0.00	0.00	0.00	0.000000
32	0.00	0.00	0.00	0.00	0.000000
33	0.00	0.00	0.00	0.00	0.000000
34	0.00	0.00	0.00	0.00	0.000000
35	0.00	0.00	0.01	0.00	0.000000
36	0.00	0.00	0.00	0.00	0.000000
37	0.00	0.00	0.00	0.00	0.000000
38	0.00	0.00	0.00	0.00	0.000000
39	0.00	0.00	0.00	0.00	0.000000

	Outdoor Sculpture	Outdoors & Recreation	Paella Restaurant \
0	0.000000	0.000000	0.00
1	0.000000	0.000000	0.00

2	0.000000	0.000000	0.00
3	0.000000	0.000000	0.01
4	0.000000	0.000000	0.00
5	0.000000	0.000000	0.00
6	0.000000	0.000000	0.00
7	0.000000	0.000000	0.00
8	0.000000	0.000000	0.00
9	0.000000	0.000000	0.00
10	0.000000	0.000000	0.00
11	0.000000	0.000000	0.00
12	0.000000	0.000000	0.00
13	0.000000	0.000000	0.00
14	0.000000	0.000000	0.00
15	0.000000	0.000000	0.00
16	0.000000	0.000000	0.00
17	0.000000	0.000000	0.00
18	0.000000	0.000000	0.00
19	0.000000	0.000000	0.00
20	0.000000	0.000000	0.00
21	0.000000	0.000000	0.00
22	0.000000	0.000000	0.00
23	0.000000	0.000000	0.00
24	0.000000	0.000000	0.00
25	0.022222	0.000000	0.00
26	0.000000	0.000000	0.00
27	0.000000	0.000000	0.00
28	0.000000	0.038462	0.00
29	0.000000	0.000000	0.00
30	0.000000	0.000000	0.00
31	0.000000	0.000000	0.00
32	0.000000	0.000000	0.00
33	0.000000	0.000000	0.00
34	0.000000	0.000000	0.01
35	0.000000	0.000000	0.00
36	0.000000	0.000000	0.00
37	0.000000	0.000000	0.00
38	0.000000	0.000000	0.00
39	0.000000	0.000000	0.00

	Pakistani Restaurant	Paper / Office Supplies Store	Park \
0	0.000000	0.000000	0.070000
1	0.000000	0.000000	0.000000
2	0.000000	0.000000	0.023256
3	0.000000	0.000000	0.010000
4	0.000000	0.010000	0.000000
5	0.000000	0.000000	0.030000
6	0.000000	0.000000	0.010000
7	0.000000	0.000000	0.000000

8	0.000000	0.000000	0.010000
9	0.000000	0.000000	0.030000
10	0.000000	0.010000	0.000000
11	0.000000	0.000000	0.020000
12	0.000000	0.000000	0.000000
13	0.000000	0.000000	0.017241
14	0.016393	0.000000	0.032787
15	0.000000	0.000000	0.035714
16	0.000000	0.010000	0.000000
17	0.000000	0.000000	0.030000
18	0.000000	0.000000	0.000000
19	0.000000	0.000000	0.016949
20	0.000000	0.000000	0.016129
21	0.000000	0.000000	0.025641
22	0.000000	0.000000	0.000000
23	0.000000	0.000000	0.030000
24	0.000000	0.000000	0.000000
25	0.000000	0.000000	0.066667
26	0.000000	0.000000	0.000000
27	0.000000	0.000000	0.000000
28	0.000000	0.000000	0.076923
29	0.000000	0.000000	0.000000
30	0.000000	0.000000	0.117647
31	0.000000	0.000000	0.010000
32	0.000000	0.000000	0.040000
33	0.000000	0.000000	0.062500
34	0.000000	0.000000	0.030000
35	0.000000	0.010000	0.010000
36	0.000000	0.000000	0.000000
37	0.000000	0.011364	0.022727
38	0.000000	0.000000	0.030000
39	0.000000	0.000000	0.020000

	Performing Arts Venue	Persian Restaurant	Peruvian Restaurant	Pet Café \
0	0.010000	0.00	0.000000	0.000000
1	0.000000	0.00	0.000000	0.000000
2	0.000000	0.00	0.000000	0.000000
3	0.000000	0.00	0.000000	0.000000
4	0.000000	0.00	0.000000	0.000000
5	0.000000	0.00	0.000000	0.000000
6	0.000000	0.00	0.010000	0.000000
7	0.000000	0.00	0.000000	0.000000
8	0.000000	0.00	0.000000	0.010000
9	0.010000	0.00	0.000000	0.000000
10	0.000000	0.00	0.000000	0.000000
11	0.000000	0.00	0.000000	0.000000
12	0.000000	0.00	0.000000	0.000000
13	0.000000	0.00	0.000000	0.000000

14	0.000000	0.00	0.000000	0.000000
15	0.000000	0.00	0.000000	0.000000
16	0.000000	0.00	0.000000	0.000000
17	0.030000	0.00	0.000000	0.000000
18	0.000000	0.00	0.000000	0.000000
19	0.016949	0.00	0.000000	0.016949
20	0.000000	0.00	0.016129	0.000000
21	0.000000	0.00	0.000000	0.000000
22	0.000000	0.00	0.000000	0.000000
23	0.000000	0.00	0.000000	0.000000
24	0.010000	0.00	0.000000	0.000000
25	0.000000	0.00	0.000000	0.000000
26	0.000000	0.00	0.010000	0.000000
27	0.000000	0.00	0.000000	0.000000
28	0.000000	0.00	0.000000	0.000000
29	0.000000	0.00	0.000000	0.000000
30	0.000000	0.00	0.000000	0.000000
31	0.000000	0.01	0.000000	0.000000
32	0.010000	0.00	0.000000	0.000000
33	0.000000	0.00	0.000000	0.000000
34	0.000000	0.00	0.000000	0.000000
35	0.000000	0.00	0.000000	0.000000
36	0.000000	0.00	0.010000	0.000000
37	0.000000	0.00	0.000000	0.000000
38	0.010000	0.00	0.000000	0.000000
39	0.000000	0.00	0.010000	0.000000

	Pet Service	Pet Store	Pharmacy	Piano Bar	Pie Shop	Pier \
0	0.000000	0.010000	0.000000	0.00	0.00	0.00
1	0.000000	0.010000	0.000000	0.00	0.00	0.00
2	0.000000	0.000000	0.000000	0.00	0.00	0.00
3	0.000000	0.010000	0.000000	0.00	0.00	0.00
4	0.000000	0.000000	0.010000	0.00	0.00	0.00
5	0.000000	0.000000	0.000000	0.00	0.00	0.00
6	0.000000	0.000000	0.000000	0.00	0.01	0.00
7	0.000000	0.022727	0.022727	0.00	0.00	0.00
8	0.000000	0.000000	0.000000	0.00	0.00	0.00
9	0.000000	0.010000	0.000000	0.00	0.00	0.00
10	0.000000	0.000000	0.010000	0.00	0.00	0.00
11	0.000000	0.000000	0.000000	0.00	0.00	0.00
12	0.000000	0.000000	0.000000	0.00	0.00	0.00
13	0.000000	0.000000	0.000000	0.00	0.00	0.00
14	0.000000	0.000000	0.000000	0.00	0.00	0.00
15	0.000000	0.017857	0.017857	0.00	0.00	0.00
16	0.000000	0.010000	0.000000	0.00	0.00	0.00
17	0.000000	0.010000	0.000000	0.00	0.00	0.00
18	0.000000	0.000000	0.000000	0.00	0.00	0.00
19	0.000000	0.000000	0.016949	0.00	0.00	0.00

20	0.000000	0.016129	0.000000	0.00	0.00	0.00
21	0.000000	0.000000	0.000000	0.00	0.00	0.00
22	0.000000	0.000000	0.043478	0.00	0.00	0.00
23	0.000000	0.000000	0.000000	0.00	0.00	0.00
24	0.000000	0.000000	0.000000	0.00	0.00	0.00
25	0.000000	0.000000	0.022222	0.00	0.00	0.00
26	0.000000	0.000000	0.000000	0.00	0.00	0.00
27	0.000000	0.000000	0.000000	0.00	0.00	0.00
28	0.000000	0.000000	0.000000	0.00	0.00	0.00
29	0.000000	0.000000	0.000000	0.00	0.00	0.00
30	0.058824	0.000000	0.000000	0.00	0.00	0.00
31	0.000000	0.000000	0.000000	0.00	0.00	0.00
32	0.000000	0.000000	0.000000	0.00	0.00	0.01
33	0.000000	0.012500	0.000000	0.00	0.00	0.00
34	0.000000	0.000000	0.000000	0.00	0.00	0.00
35	0.000000	0.010000	0.000000	0.00	0.00	0.00
36	0.000000	0.010000	0.000000	0.00	0.00	0.00
37	0.000000	0.011364	0.011364	0.00	0.00	0.00
38	0.000000	0.000000	0.000000	0.01	0.00	0.00
39	0.000000	0.000000	0.010000	0.00	0.00	0.00

	Pilates Studio	Pizza Place	Playground	Plaza	Poke Place	Pool \
0	0.00	0.020000	0.010000	0.020000	0.00	0.000000
1	0.00	0.060000	0.010000	0.000000	0.00	0.000000
2	0.00	0.023256	0.000000	0.000000	0.00	0.000000
3	0.00	0.010000	0.000000	0.000000	0.01	0.000000
4	0.00	0.010000	0.010000	0.000000	0.00	0.000000
5	0.00	0.000000	0.010000	0.010000	0.00	0.000000
6	0.00	0.010000	0.000000	0.000000	0.01	0.000000
7	0.00	0.022727	0.022727	0.000000	0.00	0.000000
8	0.00	0.030000	0.000000	0.000000	0.00	0.000000
9	0.00	0.030000	0.000000	0.010000	0.00	0.000000
10	0.00	0.000000	0.000000	0.000000	0.00	0.000000
11	0.01	0.030000	0.020000	0.000000	0.00	0.010000
12	0.01	0.010000	0.010000	0.000000	0.00	0.000000
13	0.00	0.051724	0.000000	0.000000	0.00	0.000000
14	0.00	0.000000	0.000000	0.000000	0.00	0.000000
15	0.00	0.053571	0.017857	0.000000	0.00	0.000000
16	0.00	0.040000	0.010000	0.000000	0.00	0.000000
17	0.00	0.000000	0.010000	0.050000	0.00	0.000000
18	0.01	0.020000	0.000000	0.000000	0.00	0.000000
19	0.00	0.033898	0.000000	0.000000	0.00	0.000000
20	0.00	0.048387	0.032258	0.016129	0.00	0.000000
21	0.00	0.000000	0.000000	0.000000	0.00	0.000000
22	0.00	0.043478	0.000000	0.000000	0.00	0.000000
23	0.01	0.010000	0.000000	0.000000	0.00	0.000000
24	0.00	0.010000	0.000000	0.010000	0.00	0.000000
25	0.00	0.022222	0.000000	0.000000	0.00	0.000000



26	0.00	0.010000	0.000000	0.010000	0.00	0.000000
27	0.02	0.020000	0.000000	0.000000	0.00	0.000000
28	0.00	0.038462	0.038462	0.000000	0.00	0.000000
29	0.01	0.010000	0.000000	0.000000	0.00	0.000000
30	0.00	0.000000	0.058824	0.000000	0.00	0.000000
31	0.01	0.010000	0.000000	0.000000	0.00	0.000000
32	0.00	0.010000	0.010000	0.000000	0.01	0.000000
33	0.00	0.050000	0.000000	0.012500	0.00	0.000000
34	0.00	0.010000	0.000000	0.020000	0.00	0.000000
35	0.00	0.020000	0.010000	0.010000	0.00	0.000000
36	0.00	0.010000	0.000000	0.000000	0.00	0.000000
37	0.00	0.034091	0.000000	0.011364	0.00	0.011364
38	0.00	0.020000	0.010000	0.000000	0.00	0.000000
39	0.00	0.040000	0.000000	0.000000	0.00	0.010000

	Portuguese Restaurant	Pub	Public Art	Ramen Restaurant	\
0	0.00	0.010000	0.010000	0.000000	
1	0.00	0.010000	0.000000	0.010000	
2	0.00	0.000000	0.023256	0.000000	
3	0.00	0.000000	0.000000	0.000000	
4	0.00	0.000000	0.000000	0.010000	
5	0.00	0.000000	0.000000	0.000000	
6	0.00	0.010000	0.000000	0.000000	
7	0.00	0.000000	0.000000	0.000000	
8	0.00	0.000000	0.000000	0.020000	
9	0.00	0.010000	0.000000	0.000000	
10	0.01	0.010000	0.000000	0.000000	
11	0.00	0.010000	0.000000	0.000000	
12	0.00	0.000000	0.000000	0.000000	
13	0.00	0.017241	0.000000	0.000000	
14	0.00	0.016393	0.000000	0.000000	
15	0.00	0.000000	0.000000	0.000000	
16	0.00	0.000000	0.000000	0.000000	
17	0.00	0.000000	0.000000	0.000000	
18	0.00	0.000000	0.000000	0.000000	
19	0.00	0.000000	0.000000	0.033898	
20	0.00	0.000000	0.000000	0.000000	
21	0.00	0.000000	0.000000	0.025641	
22	0.00	0.000000	0.000000	0.000000	
23	0.00	0.000000	0.000000	0.010000	
24	0.00	0.000000	0.000000	0.000000	
25	0.00	0.022222	0.000000	0.000000	
26	0.00	0.020000	0.000000	0.010000	
27	0.00	0.000000	0.000000	0.000000	
28	0.00	0.000000	0.000000	0.000000	
29	0.00	0.000000	0.000000	0.000000	
30	0.00	0.000000	0.000000	0.000000	
31	0.00	0.010000	0.000000	0.000000	

32	0.00	0.000000	0.000000	0.000000
33	0.00	0.000000	0.000000	0.000000
34	0.00	0.010000	0.000000	0.020000
35	0.00	0.000000	0.000000	0.000000
36	0.00	0.020000	0.000000	0.010000
37	0.00	0.000000	0.000000	0.011364
38	0.00	0.000000	0.000000	0.000000
39	0.00	0.020000	0.000000	0.000000

	Record	Shop	Recreation Center	Rental Car Location \
0		0.00	0.00	0.000000
1		0.00	0.00	0.000000
2		0.00	0.00	0.000000
3		0.00	0.00	0.000000
4		0.01	0.00	0.000000
5		0.00	0.00	0.000000
6		0.00	0.00	0.000000
7		0.00	0.00	0.000000
8		0.01	0.00	0.000000
9		0.00	0.00	0.000000
10		0.00	0.00	0.000000
11		0.00	0.00	0.000000
12		0.01	0.00	0.000000
13		0.00	0.00	0.000000
14		0.00	0.00	0.000000
15		0.00	0.00	0.000000
16		0.00	0.00	0.000000
17		0.00	0.01	0.000000
18		0.00	0.00	0.000000
19		0.00	0.00	0.000000
20		0.00	0.00	0.000000
21		0.00	0.00	0.000000
22		0.00	0.00	0.000000
23		0.00	0.00	0.000000
24		0.00	0.00	0.000000
25		0.00	0.00	0.000000
26		0.00	0.00	0.000000
27		0.00	0.00	0.000000
28		0.00	0.00	0.038462
29		0.00	0.00	0.000000
30		0.00	0.00	0.000000
31		0.00	0.00	0.000000
32		0.00	0.00	0.000000
33		0.00	0.00	0.000000
34		0.00	0.00	0.000000
35		0.00	0.00	0.000000
36		0.00	0.00	0.000000
37		0.00	0.00	0.011364

38	0.00	0.00	0.000000
39	0.00	0.00	0.000000

	Residential Building (Apartment / Condo)	Resort	Rest Area	Restaurant \
0	0.000000	0.00	0.000000	0.000000
1	0.000000	0.00	0.000000	0.010000
2	0.000000	0.00	0.000000	0.000000
3	0.000000	0.00	0.000000	0.000000
4	0.000000	0.00	0.000000	0.010000
5	0.000000	0.00	0.000000	0.000000
6	0.010000	0.00	0.000000	0.000000
7	0.000000	0.00	0.000000	0.022727
8	0.000000	0.00	0.000000	0.000000
9	0.000000	0.00	0.000000	0.000000
10	0.000000	0.00	0.000000	0.000000
11	0.000000	0.00	0.000000	0.040000
12	0.000000	0.00	0.000000	0.000000
13	0.000000	0.00	0.000000	0.000000
14	0.016393	0.00	0.000000	0.032787
15	0.000000	0.00	0.000000	0.035714
16	0.000000	0.00	0.000000	0.000000
17	0.000000	0.00	0.000000	0.000000
18	0.000000	0.00	0.000000	0.000000
19	0.000000	0.00	0.000000	0.000000
20	0.000000	0.00	0.000000	0.000000
21	0.000000	0.00	0.000000	0.000000
22	0.000000	0.00	0.000000	0.000000
23	0.000000	0.00	0.000000	0.000000
24	0.000000	0.00	0.000000	0.020000
25	0.000000	0.00	0.000000	0.022222
26	0.000000	0.01	0.000000	0.020000
27	0.000000	0.00	0.000000	0.000000
28	0.038462	0.00	0.000000	0.000000
29	0.000000	0.00	0.000000	0.000000
30	0.000000	0.00	0.000000	0.000000
31	0.000000	0.00	0.000000	0.010000
32	0.000000	0.00	0.000000	0.000000
33	0.000000	0.00	0.000000	0.025000
34	0.010000	0.00	0.000000	0.010000
35	0.000000	0.00	0.000000	0.000000
36	0.000000	0.00	0.000000	0.010000
37	0.000000	0.00	0.011364	0.011364
38	0.000000	0.00	0.000000	0.000000
39	0.000000	0.00	0.000000	0.000000

	Rock Climbing Spot	Rock Club	Roof Deck	Russian Restaurant	Sake Bar \
0	0.00	0.000000	0.00	0.00	0.00
1	0.00	0.000000	0.00	0.00	0.00

2	0.00	0.000000	0.00	0.00	0.00
3	0.00	0.000000	0.00	0.00	0.00
4	0.00	0.000000	0.01	0.00	0.00
5	0.00	0.000000	0.00	0.00	0.00
6	0.01	0.000000	0.01	0.00	0.00
7	0.00	0.000000	0.00	0.00	0.00
8	0.00	0.000000	0.00	0.00	0.00
9	0.00	0.000000	0.00	0.00	0.00
10	0.00	0.000000	0.00	0.01	0.00
11	0.00	0.000000	0.01	0.00	0.00
12	0.00	0.010000	0.00	0.00	0.00
13	0.00	0.000000	0.00	0.00	0.00
14	0.00	0.000000	0.00	0.00	0.00
15	0.00	0.000000	0.00	0.00	0.00
16	0.00	0.000000	0.00	0.00	0.00
17	0.00	0.000000	0.01	0.00	0.00
18	0.00	0.010000	0.00	0.00	0.00
19	0.00	0.016949	0.00	0.00	0.00
20	0.00	0.000000	0.00	0.00	0.00
21	0.00	0.000000	0.00	0.00	0.00
22	0.00	0.000000	0.00	0.00	0.00
23	0.00	0.000000	0.00	0.00	0.00
24	0.00	0.000000	0.00	0.00	0.00
25	0.00	0.000000	0.00	0.00	0.00
26	0.00	0.000000	0.00	0.00	0.00
27	0.00	0.020000	0.00	0.00	0.01
28	0.00	0.000000	0.00	0.00	0.00
29	0.00	0.000000	0.00	0.00	0.00
30	0.00	0.000000	0.00	0.00	0.00
31	0.00	0.000000	0.00	0.00	0.00
32	0.00	0.000000	0.01	0.00	0.00
33	0.00	0.000000	0.00	0.00	0.00
34	0.00	0.000000	0.01	0.00	0.01
35	0.00	0.000000	0.00	0.00	0.00
36	0.00	0.000000	0.00	0.00	0.00
37	0.00	0.000000	0.00	0.00	0.00
38	0.00	0.000000	0.00	0.00	0.00
39	0.00	0.000000	0.00	0.00	0.00

	Salad Place	Salon / Barbershop	Sandwich Place	Scenic Lookout	School \
0	0.010000	0.0000	0.020000	0.010000	0.000000
1	0.000000	0.0100	0.000000	0.010000	0.000000
2	0.000000	0.0000	0.000000	0.000000	0.000000
3	0.000000	0.0000	0.010000	0.010000	0.000000
4	0.000000	0.0300	0.020000	0.000000	0.000000
5	0.000000	0.0000	0.030000	0.000000	0.000000
6	0.000000	0.0000	0.020000	0.000000	0.000000
7	0.000000	0.0000	0.022727	0.000000	0.000000

8	0.000000	0.0000	0.000000	0.000000	0.000000
9	0.010000	0.0000	0.020000	0.000000	0.000000
10	0.010000	0.0300	0.010000	0.000000	0.000000
11	0.000000	0.0100	0.010000	0.000000	0.000000
12	0.000000	0.0100	0.020000	0.000000	0.000000
13	0.000000	0.0000	0.034483	0.000000	0.034483
14	0.016393	0.0000	0.016393	0.016393	0.000000
15	0.000000	0.0000	0.000000	0.000000	0.000000
16	0.010000	0.0100	0.000000	0.000000	0.000000
17	0.010000	0.0000	0.000000	0.000000	0.010000
18	0.010000	0.0300	0.030000	0.000000	0.000000
19	0.000000	0.0000	0.033898	0.000000	0.000000
20	0.000000	0.0000	0.000000	0.000000	0.000000
21	0.000000	0.0000	0.000000	0.000000	0.000000
22	0.000000	0.0000	0.043478	0.000000	0.000000
23	0.010000	0.0000	0.020000	0.000000	0.000000
24	0.010000	0.0000	0.010000	0.020000	0.000000
25	0.022222	0.0000	0.044444	0.000000	0.000000
26	0.000000	0.0300	0.040000	0.000000	0.000000
27	0.000000	0.0000	0.020000	0.000000	0.000000
28	0.000000	0.0000	0.076923	0.000000	0.038462
29	0.010000	0.0200	0.000000	0.000000	0.000000
30	0.000000	0.0000	0.000000	0.000000	0.000000
31	0.000000	0.0100	0.000000	0.000000	0.000000
32	0.020000	0.0000	0.000000	0.020000	0.000000
33	0.000000	0.0125	0.025000	0.000000	0.000000
34	0.000000	0.0000	0.010000	0.000000	0.000000
35	0.010000	0.0000	0.010000	0.000000	0.000000
36	0.010000	0.0000	0.000000	0.000000	0.010000
37	0.000000	0.0000	0.034091	0.011364	0.000000
38	0.000000	0.0100	0.000000	0.010000	0.000000
39	0.000000	0.0100	0.020000	0.000000	0.000000

	Sculpture Garden	Seafood Restaurant	Shanghai Restaurant	Shipping Store	\
0	0.01	0.010000	0.0000	0.000000	
1	0.00	0.000000	0.0000	0.000000	
2	0.00	0.046512	0.0000	0.000000	
3	0.00	0.030000	0.0000	0.000000	
4	0.00	0.000000	0.0100	0.000000	
5	0.00	0.000000	0.0000	0.000000	
6	0.00	0.020000	0.0000	0.000000	
7	0.00	0.000000	0.0000	0.000000	
8	0.00	0.020000	0.0000	0.000000	
9	0.00	0.010000	0.0000	0.000000	
10	0.00	0.010000	0.0000	0.000000	
11	0.00	0.000000	0.0000	0.000000	
12	0.00	0.030000	0.0000	0.000000	
13	0.00	0.017241	0.0000	0.000000	

14	0.00	0.000000	0.0000	0.000000
15	0.00	0.017857	0.0000	0.000000
16	0.00	0.000000	0.0000	0.000000
17	0.00	0.010000	0.0000	0.000000
18	0.00	0.030000	0.0000	0.000000
19	0.00	0.000000	0.0000	0.000000
20	0.00	0.000000	0.0000	0.000000
21	0.00	0.051282	0.0000	0.000000
22	0.00	0.043478	0.0000	0.000000
23	0.00	0.000000	0.0000	0.000000
24	0.00	0.010000	0.0000	0.000000
25	0.00	0.022222	0.0000	0.000000
26	0.00	0.010000	0.0100	0.000000
27	0.00	0.010000	0.0000	0.000000
28	0.00	0.000000	0.0000	0.000000
29	0.00	0.020000	0.0000	0.000000
30	0.00	0.000000	0.0000	0.000000
31	0.00	0.010000	0.0000	0.000000
32	0.00	0.010000	0.0000	0.000000
33	0.00	0.012500	0.0125	0.000000
34	0.00	0.020000	0.0000	0.000000
35	0.01	0.010000	0.0000	0.000000
36	0.00	0.020000	0.0000	0.000000
37	0.00	0.011364	0.0000	0.011364
38	0.00	0.010000	0.0000	0.000000
39	0.00	0.000000	0.0000	0.000000

	Shoe Repair	Shoe Store	Shopping Mall	Skate Park	Skating Rink	\
0	0.00	0.000000	0.020000	0.00	0.00	
1	0.00	0.010000	0.000000	0.00	0.00	
2	0.00	0.000000	0.000000	0.00	0.00	
3	0.01	0.000000	0.000000	0.00	0.00	
4	0.00	0.010000	0.000000	0.00	0.00	
5	0.00	0.000000	0.000000	0.00	0.00	
6	0.00	0.000000	0.000000	0.00	0.00	
7	0.00	0.000000	0.000000	0.00	0.00	
8	0.00	0.000000	0.000000	0.00	0.00	
9	0.00	0.010000	0.000000	0.00	0.00	
10	0.00	0.000000	0.000000	0.00	0.00	
11	0.00	0.000000	0.000000	0.00	0.00	
12	0.00	0.010000	0.000000	0.00	0.00	
13	0.00	0.000000	0.000000	0.00	0.00	
14	0.00	0.000000	0.000000	0.00	0.00	
15	0.00	0.000000	0.000000	0.00	0.00	
16	0.00	0.000000	0.000000	0.00	0.00	
17	0.00	0.000000	0.000000	0.00	0.00	
18	0.00	0.000000	0.000000	0.00	0.00	
19	0.00	0.016949	0.000000	0.00	0.00	

20	0.00	0.000000	0.000000	0.00	0.00
21	0.00	0.000000	0.000000	0.00	0.00
22	0.00	0.043478	0.043478	0.00	0.00
23	0.00	0.000000	0.000000	0.00	0.01
24	0.00	0.000000	0.000000	0.00	0.00
25	0.00	0.000000	0.000000	0.00	0.00
26	0.00	0.000000	0.000000	0.00	0.00
27	0.00	0.000000	0.000000	0.00	0.00
28	0.00	0.000000	0.000000	0.00	0.00
29	0.00	0.040000	0.000000	0.00	0.00
30	0.00	0.000000	0.000000	0.00	0.00
31	0.00	0.000000	0.000000	0.00	0.00
32	0.00	0.000000	0.000000	0.01	0.00
33	0.00	0.000000	0.000000	0.00	0.00
34	0.00	0.000000	0.000000	0.00	0.00
35	0.00	0.010000	0.000000	0.00	0.00
36	0.00	0.000000	0.000000	0.00	0.00
37	0.00	0.022727	0.000000	0.00	0.00
38	0.00	0.000000	0.000000	0.00	0.00
39	0.00	0.000000	0.000000	0.00	0.00

	Smoke Shop	Snack Place	Soba Restaurant	Social Club	Soup Place \
0	0.000000	0.00	0.00	0.00	0.00
1	0.000000	0.00	0.00	0.00	0.00
2	0.000000	0.00	0.00	0.00	0.00
3	0.000000	0.00	0.00	0.00	0.00
4	0.000000	0.01	0.00	0.00	0.00
5	0.000000	0.00	0.00	0.00	0.00
6	0.010000	0.00	0.00	0.00	0.00
7	0.000000	0.00	0.00	0.00	0.00
8	0.000000	0.00	0.00	0.00	0.01
9	0.000000	0.00	0.00	0.00	0.00
10	0.000000	0.00	0.00	0.00	0.00
11	0.000000	0.00	0.00	0.01	0.00
12	0.000000	0.01	0.00	0.00	0.00
13	0.017241	0.00	0.00	0.00	0.00
14	0.016393	0.00	0.00	0.00	0.00
15	0.000000	0.00	0.00	0.00	0.00
16	0.010000	0.00	0.00	0.00	0.00
17	0.000000	0.00	0.00	0.00	0.00
18	0.000000	0.01	0.00	0.00	0.00
19	0.000000	0.00	0.00	0.00	0.00
20	0.000000	0.00	0.00	0.00	0.00
21	0.000000	0.00	0.00	0.00	0.00
22	0.000000	0.00	0.00	0.00	0.00
23	0.010000	0.00	0.00	0.00	0.00
24	0.000000	0.01	0.00	0.00	0.00
25	0.000000	0.00	0.00	0.00	0.00

26	0.000000	0.00	0.00	0.00	0.00
27	0.000000	0.00	0.00	0.00	0.00
28	0.000000	0.00	0.00	0.00	0.00
29	0.000000	0.00	0.00	0.00	0.00
30	0.000000	0.00	0.00	0.00	0.00
31	0.010000	0.00	0.00	0.00	0.00
32	0.000000	0.00	0.00	0.00	0.00
33	0.000000	0.00	0.00	0.00	0.00
34	0.000000	0.00	0.01	0.00	0.00
35	0.000000	0.01	0.00	0.00	0.00
36	0.000000	0.00	0.00	0.00	0.00
37	0.000000	0.00	0.00	0.00	0.00
38	0.000000	0.00	0.00	0.00	0.00
39	0.000000	0.00	0.00	0.00	0.00

	South American Restaurant	South Indian Restaurant \
0	0.00	0.00
1	0.00	0.00
2	0.00	0.00
3	0.00	0.00
4	0.00	0.00
5	0.00	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00
19	0.00	0.00
20	0.00	0.00
21	0.00	0.00
22	0.00	0.00
23	0.00	0.00
24	0.01	0.00
25	0.00	0.00
26	0.00	0.00
27	0.00	0.00
28	0.00	0.00
29	0.00	0.00
30	0.00	0.00
31	0.00	0.00



32	0.00	0.00
33	0.00	0.00
34	0.00	0.00
35	0.00	0.00
36	0.00	0.01
37	0.00	0.00
38	0.00	0.00
39	0.00	0.00

	Southern / Soul Food Restaurant	Spa	Spanish Restaurant	Speakeasy \
0	0.000000	0.000000	0.000000	0.000000
1	0.000000	0.030000	0.000000	0.000000
2	0.023256	0.023256	0.000000	0.000000
3	0.000000	0.000000	0.000000	0.010000
4	0.000000	0.020000	0.010000	0.000000
5	0.000000	0.030000	0.000000	0.000000
6	0.000000	0.030000	0.000000	0.000000
7	0.000000	0.022727	0.022727	0.000000
8	0.000000	0.010000	0.010000	0.030000
9	0.000000	0.020000	0.000000	0.000000
10	0.000000	0.020000	0.000000	0.010000
11	0.000000	0.020000	0.000000	0.000000
12	0.000000	0.020000	0.000000	0.000000
13	0.000000	0.000000	0.017241	0.000000
14	0.000000	0.016393	0.000000	0.000000
15	0.000000	0.000000	0.035714	0.000000
16	0.000000	0.000000	0.010000	0.000000
17	0.000000	0.010000	0.000000	0.000000
18	0.000000	0.010000	0.010000	0.010000
19	0.000000	0.000000	0.000000	0.016949
20	0.000000	0.016129	0.000000	0.000000
21	0.000000	0.000000	0.025641	0.000000
22	0.000000	0.000000	0.000000	0.000000
23	0.000000	0.030000	0.000000	0.000000
24	0.000000	0.000000	0.000000	0.000000
25	0.000000	0.022222	0.000000	0.000000
26	0.000000	0.030000	0.010000	0.020000
27	0.010000	0.010000	0.000000	0.010000
28	0.000000	0.000000	0.000000	0.000000
29	0.000000	0.020000	0.010000	0.000000
30	0.000000	0.000000	0.000000	0.000000
31	0.000000	0.000000	0.000000	0.000000
32	0.000000	0.040000	0.000000	0.000000
33	0.000000	0.025000	0.025000	0.000000
34	0.000000	0.020000	0.010000	0.000000
35	0.000000	0.020000	0.000000	0.000000
36	0.010000	0.000000	0.000000	0.010000
37	0.000000	0.000000	0.011364	0.000000

38	0.000000	0.000000	0.000000	0.020000
39	0.000000	0.020000	0.000000	0.000000

	Spiritual Center	Sporting Goods Shop	Sports Bar	Sports Club	\
0	0.00	0.000000	0.00	0.00	
1	0.00	0.000000	0.02	0.00	
2	0.00	0.000000	0.00	0.00	
3	0.00	0.000000	0.00	0.00	
4	0.00	0.000000	0.00	0.00	
5	0.00	0.030000	0.00	0.00	
6	0.00	0.010000	0.01	0.00	
7	0.00	0.000000	0.00	0.00	
8	0.00	0.000000	0.00	0.00	
9	0.00	0.000000	0.00	0.00	
10	0.00	0.030000	0.00	0.01	
11	0.00	0.000000	0.00	0.00	
12	0.00	0.000000	0.00	0.00	
13	0.00	0.000000	0.00	0.00	
14	0.00	0.000000	0.00	0.00	
15	0.00	0.000000	0.00	0.00	
16	0.00	0.030000	0.00	0.00	
17	0.00	0.010000	0.00	0.00	
18	0.00	0.000000	0.00	0.00	
19	0.00	0.000000	0.00	0.00	
20	0.00	0.000000	0.00	0.00	
21	0.00	0.000000	0.00	0.00	
22	0.00	0.000000	0.00	0.00	
23	0.00	0.030000	0.00	0.00	
24	0.00	0.010000	0.00	0.00	
25	0.00	0.000000	0.00	0.00	
26	0.00	0.000000	0.00	0.00	
27	0.00	0.000000	0.00	0.00	
28	0.00	0.000000	0.00	0.00	
29	0.00	0.000000	0.00	0.00	
30	0.00	0.000000	0.00	0.00	
31	0.01	0.010000	0.00	0.00	
32	0.00	0.000000	0.00	0.00	
33	0.00	0.000000	0.00	0.00	
34	0.00	0.000000	0.00	0.00	
35	0.00	0.000000	0.00	0.00	
36	0.00	0.000000	0.01	0.00	
37	0.00	0.011364	0.00	0.00	
38	0.00	0.000000	0.00	0.00	
39	0.00	0.000000	0.01	0.00	

	Steakhouse	Street Art	Strip Club	Supermarket	Supplement Shop	\
0	0.010000	0.000000	0.00	0.000000	0.000000	
1	0.000000	0.000000	0.00	0.010000	0.000000	

2	0.000000	0.000000	0.00	0.000000	0.000000
3	0.010000	0.000000	0.00	0.000000	0.000000
4	0.000000	0.000000	0.00	0.000000	0.000000
5	0.000000	0.000000	0.01	0.000000	0.000000
6	0.000000	0.000000	0.00	0.010000	0.000000
7	0.022727	0.022727	0.00	0.000000	0.000000
8	0.000000	0.000000	0.00	0.000000	0.000000
9	0.040000	0.000000	0.00	0.000000	0.000000
10	0.000000	0.000000	0.00	0.000000	0.000000
11	0.010000	0.000000	0.00	0.000000	0.010000
12	0.000000	0.000000	0.00	0.000000	0.000000
13	0.000000	0.000000	0.00	0.000000	0.000000
14	0.016393	0.000000	0.00	0.016393	0.000000
15	0.000000	0.000000	0.00	0.017857	0.000000
16	0.020000	0.000000	0.00	0.000000	0.000000
17	0.010000	0.000000	0.00	0.000000	0.000000
18	0.000000	0.000000	0.00	0.010000	0.000000
19	0.000000	0.000000	0.00	0.000000	0.000000
20	0.000000	0.000000	0.00	0.000000	0.000000
21	0.000000	0.000000	0.00	0.025641	0.000000
22	0.043478	0.000000	0.00	0.000000	0.043478
23	0.040000	0.000000	0.00	0.000000	0.000000
24	0.010000	0.000000	0.00	0.000000	0.000000
25	0.000000	0.000000	0.00	0.022222	0.000000
26	0.020000	0.000000	0.00	0.000000	0.000000
27	0.010000	0.010000	0.00	0.000000	0.000000
28	0.000000	0.000000	0.00	0.038462	0.000000
29	0.000000	0.000000	0.00	0.010000	0.000000
30	0.000000	0.000000	0.00	0.000000	0.000000
31	0.010000	0.000000	0.01	0.000000	0.000000
32	0.020000	0.000000	0.00	0.000000	0.000000
33	0.000000	0.000000	0.00	0.000000	0.012500
34	0.040000	0.000000	0.00	0.000000	0.000000
35	0.010000	0.000000	0.00	0.000000	0.000000
36	0.010000	0.010000	0.00	0.000000	0.000000
37	0.000000	0.000000	0.00	0.022727	0.011364
38	0.000000	0.000000	0.00	0.010000	0.000000
39	0.000000	0.000000	0.00	0.000000	0.000000

	Sushi Restaurant	Swiss Restaurant	Szechuan Restaurant	Taco Place \
0	0.010000	0.00	0.000000	0.000000
1	0.010000	0.00	0.000000	0.000000
2	0.000000	0.00	0.000000	0.000000
3	0.010000	0.00	0.000000	0.010000
4	0.000000	0.00	0.000000	0.000000
5	0.020000	0.00	0.000000	0.000000
6	0.000000	0.00	0.000000	0.010000
7	0.000000	0.00	0.000000	0.022727

8	0.000000	0.01	0.000000	0.000000
9	0.000000	0.00	0.000000	0.000000
10	0.010000	0.00	0.000000	0.000000
11	0.010000	0.00	0.000000	0.010000
12	0.040000	0.00	0.000000	0.000000
13	0.034483	0.00	0.000000	0.000000
14	0.000000	0.00	0.000000	0.000000
15	0.000000	0.00	0.000000	0.000000
16	0.050000	0.00	0.000000	0.010000
17	0.000000	0.00	0.000000	0.000000
18	0.000000	0.01	0.000000	0.000000
19	0.000000	0.00	0.000000	0.000000
20	0.016129	0.00	0.032258	0.000000
21	0.025641	0.00	0.000000	0.000000
22	0.000000	0.00	0.000000	0.000000
23	0.020000	0.00	0.010000	0.000000
24	0.010000	0.00	0.000000	0.000000
25	0.000000	0.00	0.000000	0.000000
26	0.010000	0.00	0.000000	0.020000
27	0.030000	0.00	0.000000	0.010000
28	0.000000	0.00	0.000000	0.000000
29	0.000000	0.01	0.000000	0.000000
30	0.000000	0.00	0.000000	0.000000
31	0.020000	0.00	0.010000	0.000000
32	0.010000	0.00	0.000000	0.000000
33	0.025000	0.00	0.000000	0.012500
34	0.040000	0.00	0.000000	0.000000
35	0.020000	0.00	0.000000	0.000000
36	0.020000	0.00	0.000000	0.000000
37	0.011364	0.00	0.000000	0.000000
38	0.020000	0.00	0.000000	0.010000
39	0.040000	0.00	0.000000	0.000000

	Tailor Shop	Taiwanese Restaurant	Tapas Restaurant	Tattoo Parlor \
0	0.000000	0.00	0.000000	0.00
1	0.000000	0.00	0.000000	0.00
2	0.000000	0.00	0.023256	0.00
3	0.000000	0.00	0.020000	0.00
4	0.000000	0.01	0.000000	0.00
5	0.000000	0.00	0.000000	0.00
6	0.000000	0.00	0.000000	0.00
7	0.000000	0.00	0.000000	0.00
8	0.010000	0.01	0.010000	0.00
9	0.000000	0.00	0.000000	0.00
10	0.000000	0.00	0.010000	0.00
11	0.000000	0.00	0.000000	0.00
12	0.000000	0.00	0.010000	0.00
13	0.000000	0.00	0.000000	0.00

14	0.000000	0.00	0.000000	0.00
15	0.000000	0.00	0.000000	0.00
16	0.000000	0.00	0.000000	0.00
17	0.000000	0.00	0.000000	0.00
18	0.000000	0.00	0.000000	0.00
19	0.016949	0.00	0.000000	0.00
20	0.000000	0.00	0.000000	0.00
21	0.000000	0.00	0.000000	0.00
22	0.000000	0.00	0.000000	0.00
23	0.010000	0.00	0.000000	0.00
24	0.000000	0.00	0.000000	0.01
25	0.000000	0.00	0.000000	0.00
26	0.010000	0.00	0.000000	0.00
27	0.000000	0.00	0.010000	0.01
28	0.000000	0.00	0.000000	0.00
29	0.000000	0.00	0.010000	0.01
30	0.000000	0.00	0.000000	0.00
31	0.000000	0.00	0.000000	0.00
32	0.000000	0.00	0.000000	0.00
33	0.000000	0.00	0.000000	0.00
34	0.000000	0.00	0.000000	0.00
35	0.000000	0.00	0.010000	0.00
36	0.000000	0.00	0.000000	0.00
37	0.000000	0.00	0.022727	0.00
38	0.000000	0.00	0.000000	0.00
39	0.000000	0.00	0.000000	0.00

	Tea Room	Tech Startup	Tennis Court	Tennis Stadium	Thai Restaurant \
0	0.00	0.00	0.000000	0.000000	0.000000
1	0.00	0.00	0.000000	0.000000	0.010000
2	0.00	0.00	0.000000	0.000000	0.000000
3	0.00	0.00	0.000000	0.000000	0.000000
4	0.01	0.00	0.000000	0.000000	0.000000
5	0.00	0.00	0.000000	0.000000	0.000000
6	0.00	0.00	0.010000	0.000000	0.010000
7	0.00	0.00	0.000000	0.000000	0.045455
8	0.00	0.00	0.000000	0.000000	0.000000
9	0.00	0.00	0.000000	0.000000	0.000000
10	0.00	0.01	0.000000	0.000000	0.010000
11	0.00	0.00	0.000000	0.000000	0.020000
12	0.00	0.00	0.000000	0.000000	0.000000
13	0.00	0.00	0.000000	0.000000	0.000000
14	0.00	0.00	0.000000	0.000000	0.032787
15	0.00	0.00	0.000000	0.000000	0.000000
16	0.01	0.00	0.000000	0.000000	0.020000
17	0.00	0.00	0.000000	0.000000	0.000000
18	0.01	0.00	0.000000	0.000000	0.020000
19	0.00	0.00	0.016949	0.000000	0.000000

20	0.00	0.00	0.000000	0.000000	0.032258
21	0.00	0.00	0.000000	0.000000	0.000000
22	0.00	0.00	0.000000	0.043478	0.000000
23	0.00	0.00	0.000000	0.000000	0.000000
24	0.00	0.00	0.000000	0.000000	0.000000
25	0.00	0.00	0.044444	0.000000	0.000000
26	0.01	0.00	0.000000	0.000000	0.020000
27	0.00	0.00	0.000000	0.000000	0.010000
28	0.00	0.00	0.000000	0.000000	0.000000
29	0.02	0.00	0.000000	0.000000	0.000000
30	0.00	0.00	0.000000	0.000000	0.000000
31	0.01	0.00	0.010000	0.000000	0.010000
32	0.00	0.00	0.000000	0.000000	0.000000
33	0.00	0.00	0.012500	0.000000	0.025000
34	0.00	0.00	0.010000	0.000000	0.010000
35	0.00	0.00	0.000000	0.000000	0.000000
36	0.00	0.00	0.000000	0.000000	0.020000
37	0.00	0.00	0.000000	0.000000	0.000000
38	0.01	0.00	0.000000	0.000000	0.000000
39	0.00	0.00	0.000000	0.000000	0.020000

	Theater	Theme Park Ride / Attraction	Thrift / Vintage Store \
0	0.000000	0.00	0.00
1	0.000000	0.00	0.00
2	0.000000	0.00	0.00
3	0.030000	0.00	0.00
4	0.000000	0.00	0.00
5	0.010000	0.00	0.00
6	0.110000	0.00	0.00
7	0.000000	0.00	0.00
8	0.000000	0.00	0.00
9	0.000000	0.00	0.00
10	0.000000	0.00	0.00
11	0.000000	0.00	0.04
12	0.000000	0.00	0.00
13	0.000000	0.00	0.00
14	0.049180	0.00	0.00
15	0.000000	0.00	0.00
16	0.000000	0.00	0.00
17	0.060000	0.00	0.00
18	0.000000	0.00	0.00
19	0.016949	0.00	0.00
20	0.000000	0.00	0.00
21	0.000000	0.00	0.00
22	0.000000	0.00	0.00
23	0.040000	0.01	0.00
24	0.000000	0.00	0.00
25	0.000000	0.00	0.00

26	0.000000	0.00	0.00
27	0.010000	0.00	0.00
28	0.000000	0.00	0.00
29	0.000000	0.00	0.00
30	0.000000	0.00	0.00
31	0.000000	0.00	0.00
32	0.000000	0.00	0.00
33	0.000000	0.00	0.00
34	0.000000	0.00	0.00
35	0.000000	0.00	0.00
36	0.000000	0.00	0.00
37	0.000000	0.00	0.00
38	0.020000	0.00	0.01
39	0.000000	0.00	0.00

	Tibetan Restaurant	Tiki Bar	Tourist Information Center \
0	0.00	0.00	0.00
1	0.00	0.00	0.00
2	0.00	0.00	0.00
3	0.00	0.00	0.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	0.00	0.01	0.00
12	0.00	0.00	0.00
13	0.00	0.00	0.00
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00
19	0.00	0.00	0.00
20	0.00	0.00	0.00
21	0.00	0.00	0.00
22	0.00	0.00	0.00
23	0.00	0.00	0.00
24	0.00	0.00	0.00
25	0.00	0.00	0.00
26	0.00	0.00	0.00
27	0.01	0.00	0.00
28	0.00	0.00	0.00
29	0.00	0.00	0.00
30	0.00	0.00	0.00
31	0.00	0.00	0.00

32	0.00	0.00	0.00
33	0.00	0.00	0.00
34	0.00	0.00	0.01
35	0.00	0.00	0.00
36	0.00	0.00	0.00
37	0.00	0.00	0.00
38	0.00	0.00	0.00
39	0.00	0.00	0.00

	Toy / Game Store	Track	Trail	Tree	Turkish Restaurant \
0	0.00	0.000000	0.000000	0.01	0.00
1	0.00	0.000000	0.000000	0.00	0.01
2	0.00	0.000000	0.000000	0.00	0.00
3	0.00	0.000000	0.000000	0.00	0.00
4	0.00	0.000000	0.000000	0.00	0.00
5	0.01	0.000000	0.000000	0.00	0.00
6	0.00	0.000000	0.000000	0.00	0.00
7	0.00	0.000000	0.000000	0.00	0.00
8	0.00	0.000000	0.000000	0.00	0.00
9	0.00	0.000000	0.000000	0.00	0.00
10	0.01	0.000000	0.000000	0.00	0.00
11	0.00	0.000000	0.000000	0.00	0.00
12	0.00	0.000000	0.000000	0.00	0.00
13	0.00	0.000000	0.000000	0.00	0.00
14	0.00	0.000000	0.000000	0.00	0.00
15	0.00	0.000000	0.017857	0.00	0.00
16	0.01	0.000000	0.000000	0.00	0.02
17	0.00	0.000000	0.000000	0.00	0.00
18	0.00	0.000000	0.000000	0.00	0.00
19	0.00	0.016949	0.000000	0.00	0.00
20	0.00	0.000000	0.000000	0.00	0.00
21	0.00	0.000000	0.000000	0.00	0.00
22	0.00	0.000000	0.000000	0.00	0.00
23	0.00	0.000000	0.000000	0.00	0.00
24	0.00	0.000000	0.000000	0.00	0.00
25	0.00	0.000000	0.000000	0.00	0.00
26	0.00	0.000000	0.000000	0.00	0.00
27	0.00	0.000000	0.000000	0.00	0.00
28	0.00	0.000000	0.000000	0.00	0.00
29	0.00	0.000000	0.000000	0.00	0.00
30	0.00	0.000000	0.000000	0.00	0.00
31	0.00	0.000000	0.000000	0.00	0.00
32	0.00	0.000000	0.000000	0.00	0.00
33	0.00	0.000000	0.012500	0.00	0.00
34	0.00	0.000000	0.010000	0.00	0.01
35	0.00	0.000000	0.000000	0.00	0.01
36	0.01	0.000000	0.010000	0.00	0.01
37	0.00	0.000000	0.000000	0.00	0.00



38	0.00	0.000000	0.000000	0.00	0.00
39	0.00	0.000000	0.000000	0.00	0.00

	Udon Restaurant	Used Bookstore	Vegetarian / Vegan Restaurant	\
0	0.00	0.00		0.00
1	0.00	0.00		0.01
2	0.00	0.00		0.00
3	0.00	0.00		0.01
4	0.00	0.00		0.00
5	0.00	0.00		0.00
6	0.00	0.00		0.01
7	0.00	0.00		0.00
8	0.00	0.01		0.03
9	0.00	0.00		0.02
10	0.00	0.00		0.03
11	0.00	0.00		0.00
12	0.01	0.00		0.01
13	0.00	0.00		0.00
14	0.00	0.00		0.00
15	0.00	0.00		0.00
16	0.00	0.00		0.01
17	0.00	0.00		0.00
18	0.00	0.00		0.01
19	0.00	0.00		0.00
20	0.00	0.00		0.00
21	0.00	0.00		0.00
22	0.00	0.00		0.00
23	0.00	0.00		0.00
24	0.00	0.00		0.02
25	0.00	0.00		0.00
26	0.00	0.00		0.01
27	0.01	0.00		0.00
28	0.00	0.00		0.00
29	0.00	0.00		0.02
30	0.00	0.00		0.00
31	0.00	0.00		0.01
32	0.00	0.00		0.01
33	0.00	0.00		0.00
34	0.00	0.00		0.00
35	0.00	0.00		0.02
36	0.00	0.01		0.03
37	0.00	0.00		0.00
38	0.00	0.00		0.00
39	0.00	0.00		0.00

	Venezuelan Restaurant	Veterinarian	Video Game Store	Video Store	\
0	0.00	0.000000	0.000000	0.00	
1	0.00	0.000000	0.000000	0.00	

2	0.00	0.000000	0.000000	0.00
3	0.00	0.000000	0.000000	0.00
4	0.00	0.000000	0.000000	0.00
5	0.00	0.000000	0.000000	0.00
6	0.00	0.000000	0.000000	0.00
7	0.00	0.000000	0.000000	0.00
8	0.00	0.000000	0.000000	0.00
9	0.00	0.000000	0.000000	0.00
10	0.00	0.000000	0.000000	0.00
11	0.00	0.000000	0.000000	0.00
12	0.00	0.000000	0.000000	0.00
13	0.00	0.000000	0.000000	0.00
14	0.00	0.000000	0.000000	0.00
15	0.00	0.017857	0.000000	0.00
16	0.00	0.000000	0.000000	0.00
17	0.00	0.000000	0.000000	0.00
18	0.00	0.000000	0.000000	0.00
19	0.00	0.000000	0.000000	0.00
20	0.00	0.000000	0.000000	0.00
21	0.00	0.000000	0.000000	0.00
22	0.00	0.000000	0.043478	0.00
23	0.00	0.000000	0.000000	0.00
24	0.00	0.000000	0.000000	0.00
25	0.00	0.000000	0.000000	0.00
26	0.00	0.000000	0.000000	0.00
27	0.01	0.000000	0.000000	0.00
28	0.00	0.000000	0.000000	0.00
29	0.00	0.000000	0.000000	0.00
30	0.00	0.000000	0.000000	0.00
31	0.00	0.000000	0.000000	0.00
32	0.00	0.000000	0.000000	0.00
33	0.00	0.000000	0.000000	0.00
34	0.00	0.000000	0.000000	0.00
35	0.00	0.000000	0.000000	0.00
36	0.00	0.000000	0.000000	0.00
37	0.00	0.000000	0.011364	0.00
38	0.00	0.000000	0.000000	0.00
39	0.00	0.000000	0.000000	0.01

	Vietnamese Restaurant	Volleyball Court	Watch Shop	Waterfront	\
0	0.000000	0.00	0.00	0.000000	
1	0.020000	0.00	0.00	0.000000	
2	0.000000	0.00	0.00	0.000000	
3	0.000000	0.00	0.00	0.000000	
4	0.040000	0.00	0.00	0.000000	
5	0.000000	0.00	0.00	0.000000	
6	0.000000	0.00	0.00	0.000000	
7	0.000000	0.00	0.00	0.000000	

8	0.020000	0.00	0.00	0.000000
9	0.000000	0.00	0.00	0.000000
10	0.000000	0.00	0.00	0.000000
11	0.010000	0.00	0.00	0.000000
12	0.020000	0.00	0.01	0.000000
13	0.000000	0.00	0.00	0.000000
14	0.000000	0.00	0.00	0.000000
15	0.000000	0.00	0.00	0.000000
16	0.000000	0.00	0.00	0.000000
17	0.000000	0.00	0.00	0.000000
18	0.010000	0.00	0.00	0.000000
19	0.016949	0.00	0.00	0.000000
20	0.016129	0.00	0.00	0.000000
21	0.000000	0.00	0.00	0.000000
22	0.000000	0.00	0.00	0.000000
23	0.000000	0.00	0.00	0.000000
24	0.000000	0.00	0.00	0.000000
25	0.000000	0.00	0.00	0.000000
26	0.000000	0.00	0.00	0.000000
27	0.000000	0.00	0.00	0.000000
28	0.000000	0.00	0.00	0.038462
29	0.000000	0.00	0.01	0.000000
30	0.000000	0.00	0.00	0.000000
31	0.010000	0.00	0.00	0.000000
32	0.010000	0.01	0.00	0.000000
33	0.000000	0.00	0.00	0.000000
34	0.000000	0.00	0.00	0.000000
35	0.000000	0.00	0.00	0.000000
36	0.000000	0.00	0.00	0.000000
37	0.000000	0.00	0.00	0.000000
38	0.000000	0.00	0.00	0.000000
39	0.020000	0.00	0.00	0.000000

	Weight Loss Center	Whisky Bar	Wine Bar	Wine Shop	Wings Joint \
0	0.00	0.00	0.010000	0.030000	0.000000
1	0.00	0.00	0.010000	0.030000	0.000000
2	0.00	0.00	0.000000	0.000000	0.000000
3	0.00	0.00	0.000000	0.010000	0.000000
4	0.00	0.00	0.000000	0.000000	0.000000
5	0.00	0.00	0.010000	0.010000	0.010000
6	0.00	0.00	0.020000	0.030000	0.000000
7	0.00	0.00	0.000000	0.000000	0.000000
8	0.00	0.00	0.050000	0.020000	0.000000
9	0.00	0.00	0.010000	0.040000	0.000000
10	0.01	0.00	0.000000	0.020000	0.000000
11	0.00	0.00	0.000000	0.030000	0.000000
12	0.00	0.00	0.010000	0.000000	0.000000
13	0.00	0.00	0.017241	0.000000	0.000000

14	0.00	0.00	0.000000	0.000000	0.000000
15	0.00	0.00	0.035714	0.017857	0.000000
16	0.00	0.00	0.010000	0.020000	0.000000
17	0.00	0.00	0.010000	0.020000	0.000000
18	0.00	0.00	0.020000	0.010000	0.000000
19	0.00	0.00	0.000000	0.000000	0.000000
20	0.00	0.00	0.000000	0.016129	0.016129
21	0.00	0.00	0.000000	0.000000	0.000000
22	0.00	0.00	0.000000	0.000000	0.000000
23	0.00	0.00	0.000000	0.000000	0.000000
24	0.00	0.00	0.010000	0.000000	0.000000
25	0.00	0.00	0.000000	0.000000	0.000000
26	0.00	0.00	0.010000	0.000000	0.000000
27	0.00	0.01	0.010000	0.020000	0.010000
28	0.00	0.00	0.000000	0.000000	0.000000
29	0.00	0.00	0.010000	0.000000	0.000000
30	0.00	0.00	0.000000	0.000000	0.000000
31	0.00	0.00	0.010000	0.010000	0.000000
32	0.00	0.01	0.030000	0.030000	0.000000
33	0.00	0.00	0.000000	0.000000	0.000000
34	0.00	0.00	0.040000	0.000000	0.000000
35	0.00	0.00	0.000000	0.020000	0.000000
36	0.00	0.00	0.030000	0.000000	0.000000
37	0.00	0.00	0.011364	0.022727	0.000000
38	0.00	0.00	0.040000	0.000000	0.000000
39	0.00	0.00	0.020000	0.020000	0.000000

	Women's Store	Yoga Studio
0	0.030000	0.000000
1	0.010000	0.030000
2	0.000000	0.000000
3	0.010000	0.000000
4	0.000000	0.010000
5	0.000000	0.030000
6	0.000000	0.000000
7	0.000000	0.000000
8	0.000000	0.000000
9	0.010000	0.000000
10	0.030000	0.030000
11	0.000000	0.010000
12	0.000000	0.020000
13	0.000000	0.034483
14	0.000000	0.000000
15	0.000000	0.017857
16	0.010000	0.000000
17	0.000000	0.010000
18	0.020000	0.030000
19	0.016949	0.016949

20	0.000000	0.032258
21	0.000000	0.000000
22	0.000000	0.043478
23	0.020000	0.010000
24	0.000000	0.020000
25	0.000000	0.000000
26	0.000000	0.000000
27	0.000000	0.010000
28	0.000000	0.000000
29	0.060000	0.020000
30	0.000000	0.000000
31	0.000000	0.020000
32	0.000000	0.010000
33	0.000000	0.012500
34	0.000000	0.000000
35	0.010000	0.020000
36	0.000000	0.010000
37	0.011364	0.000000
38	0.000000	0.000000
39	0.000000	0.000000

**Let's confirm the new size**

```
In [35]: manhattan_grouped.shape
```

```
Out[35]: (40, 328)
```

**Let's print each neighborhood along with the top 5 most common venues**

```
In [36]: num_top_venues = 5
```

```
for hood in manhattan_grouped['Neighborhood']:
    print("----"+hood+"----")
    temp = manhattan_grouped[manhattan_grouped['Neighborhood'] == hood].T.reset_index()
    temp.columns = ['venue', 'freq']
    temp = temp.iloc[1:]
    temp['freq'] = temp['freq'].astype(float)
    temp = temp.round({'freq': 2})
    print(temp.sort_values('freq', ascending=False).reset_index(drop=True).head(num_top_venues))
    print('\n')
```

```
----Battery Park City----
```

	venue	freq
0	Coffee Shop	0.08
1	Park	0.07
2	Hotel	0.05
3	Gym	0.03
4	Women's Store	0.03

----Carnegie Hill----

	venue	freq
0	Pizza Place	0.06
1	Coffee Shop	0.05
2	Cosmetics Shop	0.05
3	Café	0.04
4	Gym	0.03

----Central Harlem----

	venue	freq
0	African Restaurant	0.07
1	Chinese Restaurant	0.05
2	American Restaurant	0.05
3	Seafood Restaurant	0.05
4	Cosmetics Shop	0.05

----Chelsea----

	venue	freq
0	Italian Restaurant	0.06
1	Coffee Shop	0.06
2	Ice Cream Shop	0.05
3	Bakery	0.04
4	Nightclub	0.04

----Chinatown----

	venue	freq
0	Chinese Restaurant	0.09
1	Cocktail Bar	0.05
2	Dim Sum Restaurant	0.04
3	American Restaurant	0.04
4	Vietnamese Restaurant	0.04

----Civic Center----

	venue	freq
0	Gym / Fitness Center	0.06
1	Bakery	0.05
2	Italian Restaurant	0.05
3	Cocktail Bar	0.03
4	Coffee Shop	0.03

----Clinton----

	venue	freq
0	Theater	0.11
1	Gym / Fitness Center	0.04
2	Coffee Shop	0.04
3	American Restaurant	0.04
4	Italian Restaurant	0.04

----East Harlem----

	venue	freq
0	Mexican Restaurant	0.14
1	Bakery	0.09
2	Latin American Restaurant	0.07
3	Deli / Bodega	0.07
4	Thai Restaurant	0.05

----East Village----

	venue	freq
0	Ice Cream Shop	0.07
1	Bar	0.06
2	Wine Bar	0.05
3	Cocktail Bar	0.04
4	Mexican Restaurant	0.04

----Financial District----

	venue	freq
0	Coffee Shop	0.10
1	Hotel	0.05
2	Steakhouse	0.04
3	Gym	0.04
4	Bar	0.04

----Flatiron----

	venue	freq
0	Gym / Fitness Center	0.04
1	Italian Restaurant	0.04
2	American Restaurant	0.04
3	Gym	0.04
4	Vegetarian / Vegan Restaurant	0.03

----Gramercy----

	venue	freq
0	Italian Restaurant	0.06
1	Bagel Shop	0.04

2	Cocktail Bar	0.04
3	Thrift / Vintage Store	0.04
4	Restaurant	0.04

----Greenwich Village----

	venue	freq
0	Italian Restaurant	0.09
1	Clothing Store	0.04
2	French Restaurant	0.04
3	Sushi Restaurant	0.04
4	Boutique	0.03

----Hamilton Heights----

	venue	freq
0	Mexican Restaurant	0.09
1	Café	0.07
2	Coffee Shop	0.07
3	Pizza Place	0.05
4	Yoga Studio	0.03

----Hudson Yards----

	venue	freq
0	Coffee Shop	0.10
1	Italian Restaurant	0.07
2	Theater	0.05
3	Café	0.05
4	Hotel	0.05

----Inwood----

	venue	freq
0	Lounge	0.07
1	Mexican Restaurant	0.07
2	Pizza Place	0.05
3	Café	0.05
4	Deli / Bodega	0.04

----Lenox Hill----

	venue	freq
0	Coffee Shop	0.06
1	Italian Restaurant	0.06
2	Sushi Restaurant	0.05
3	Pizza Place	0.04
4	Gym / Fitness Center	0.04



----Lincoln Square----

	venue	freq
0	Gym / Fitness Center	0.06
1	Theater	0.06
2	Plaza	0.05
3	Italian Restaurant	0.05
4	Concert Hall	0.05

----Little Italy----

	venue	freq
0	Bakery	0.07
1	Café	0.04
2	Ice Cream Shop	0.03
3	Chinese Restaurant	0.03
4	Bubble Tea Shop	0.03

----Lower East Side----

	venue	freq
0	Café	0.05
1	Coffee Shop	0.05
2	Japanese Restaurant	0.03
3	Bakery	0.03
4	Pizza Place	0.03

----Manhattan Valley----

	venue	freq
0	Pizza Place	0.05
1	Bar	0.05
2	Coffee Shop	0.05
3	Yoga Studio	0.03
4	Szechuan Restaurant	0.03

----Manhattanville----

	venue	freq
0	Deli / Bodega	0.08
1	Italian Restaurant	0.05
2	Mexican Restaurant	0.05
3	Chinese Restaurant	0.05
4	Seafood Restaurant	0.05

----Marble Hill----

	venue	freq
0	Discount Store	0.09
1	Coffee Shop	0.09
2	Yoga Studio	0.04
3	Bank	0.04
4	Department Store	0.04

----Midtown----

	venue	freq
0	Hotel	0.06
1	Theater	0.04
2	Steakhouse	0.04
3	Coffee Shop	0.04
4	Park	0.03

----Midtown South----

	venue	freq
0	Korean Restaurant	0.17
1	Hotel Bar	0.04
2	Cosmetics Shop	0.04
3	Coffee Shop	0.04
4	Italian Restaurant	0.03

----Morningside Heights----

	venue	freq
0	Coffee Shop	0.11
1	American Restaurant	0.07
2	Park	0.07
3	Bookstore	0.07
4	Burger Joint	0.04

----Murray Hill----

	venue	freq
0	Hotel	0.04
1	Sandwich Place	0.04
2	Salon / Barbershop	0.03
3	Burger Joint	0.03
4	Spa	0.03

----Noho----

	venue	freq
0	Italian Restaurant	0.07
1	French Restaurant	0.05

2	Cocktail Bar	0.04
3	Sushi Restaurant	0.03
4	Hotel	0.03

----Roosevelt Island----

	venue	freq
0	Sandwich Place	0.08
1	Park	0.08
2	Supermarket	0.04
3	Coffee Shop	0.04
4	Greek Restaurant	0.04

----Soho----

	venue	freq
0	Clothing Store	0.10
1	Boutique	0.07
2	Women's Store	0.06
3	Men's Store	0.04
4	Shoe Store	0.04

----Stuyvesant Town----

	venue	freq
0	Bar	0.24
1	Park	0.12
2	Heliport	0.06
3	Basketball Court	0.06
4	Gas Station	0.06

----Sutton Place----

	venue	freq
0	Italian Restaurant	0.06
1	Gym / Fitness Center	0.06
2	Indian Restaurant	0.04
3	Furniture / Home Store	0.04
4	American Restaurant	0.03

----Tribeca----

	venue	freq
0	American Restaurant	0.06
1	Italian Restaurant	0.06
2	Park	0.04
3	Spa	0.04
4	Café	0.04

----Tudor City----

	venue	freq
0	Park	0.06
1	Café	0.05
2	Mexican Restaurant	0.05
3	Pizza Place	0.05
4	Greek Restaurant	0.05

----Turtle Bay----

	venue	freq
0	Italian Restaurant	0.06
1	Coffee Shop	0.04
2	Steakhouse	0.04
3	Sushi Restaurant	0.04
4	Wine Bar	0.04

----Upper East Side----

	venue	freq
0	Exhibit	0.07
1	Italian Restaurant	0.07
2	Coffee Shop	0.05
3	Art Gallery	0.05
4	Bakery	0.04

----Upper West Side----

	venue	freq
0	Italian Restaurant	0.06
1	Bar	0.04
2	Coffee Shop	0.03
3	Wine Bar	0.03
4	Vegetarian / Vegan Restaurant	0.03

----Washington Heights----

	venue	freq
0	Café	0.07
1	Bakery	0.05
2	Sandwich Place	0.03
3	Pizza Place	0.03
4	Mobile Phone Shop	0.03

----West Village----

	venue	freq
0	Italian Restaurant	0.10
1	New American Restaurant	0.05
2	Cosmetics Shop	0.05
3	Wine Bar	0.04
4	Gastropub	0.04

----Yorkville----

	venue	freq
0	Coffee Shop	0.07
1	Gym	0.06
2	Bar	0.06
3	Sushi Restaurant	0.04
4	Italian Restaurant	0.04

**Let's put that into a *pandas* dataframe** First, let's write a function to sort the venues in descending order.

```
In [37]: def return_most_common_venues(row, num_top_venues):
          row_categories = row.iloc[1:]
          row_categories_sorted = row_categories.sort_values(ascending=False)

          return row_categories_sorted.index.values[0:num_top_venues]
```

Now let's create the new dataframe and display the top 10 venues for each neighborhood.

```
In [38]: num_top_venues = 10

          indicators = ['st', 'nd', 'rd']

          # create columns according to number of top venues
          columns = ['Neighborhood']
          for ind in np.arange(num_top_venues):
              try:
                  columns.append('{}{} Most Common Venue'.format(ind+1, indicators[ind]))
              except:
                  columns.append('{}th Most Common Venue'.format(ind+1))

          # create a new dataframe
          neighborhoods_venues_sorted = pd.DataFrame(columns=columns)
          neighborhoods_venues_sorted['Neighborhood'] = manhattan_grouped['Neighborhood']

          for ind in np.arange(manhattan_grouped.shape[0]):
              neighborhoods_venues_sorted.iloc[ind, 1:] = return_most_common_venues(manhattan_grouped.iloc[ind, 1:])
```

neighborhoods\_venues\_sorted

```

Out[38]:
      Neighborhood 1st Most Common Venue 2nd Most Common Venue \
0    Battery Park City      Coffee Shop      Park
1    Carnegie Hill      Pizza Place      Cosmetics Shop
2    Central Harlem      African Restaurant      Chinese Restaurant
3    Chelsea      Coffee Shop      Italian Restaurant
4    Chinatown      Chinese Restaurant      Cocktail Bar
5    Civic Center      Gym / Fitness Center      Italian Restaurant
6    Clinton      Theater      Coffee Shop
7    East Harlem      Mexican Restaurant      Bakery
8    East Village      Ice Cream Shop      Bar
9    Financial District      Coffee Shop      Hotel
10   Flatiron      Gym / Fitness Center      Gym
11   Gramercy      Italian Restaurant      Bagel Shop
12   Greenwich Village      Italian Restaurant      French Restaurant
13   Hamilton Heights      Mexican Restaurant      Coffee Shop
14   Hudson Yards      Coffee Shop      Italian Restaurant
15   Inwood      Mexican Restaurant      Lounge
16   Lenox Hill      Italian Restaurant      Coffee Shop
17   Lincoln Square      Theater      Gym / Fitness Center
18   Little Italy      Bakery      Café
19   Lower East Side      Café      Coffee Shop
20   Manhattan Valley      Coffee Shop      Pizza Place
21   Manhattanville      Deli / Bodega      Italian Restaurant
22   Marble Hill      Coffee Shop      Discount Store
23   Midtown      Hotel      Theater
24   Midtown South      Korean Restaurant      Cosmetics Shop
25   Morningside Heights      Coffee Shop      Park
26   Murray Hill      Hotel      Sandwich Place
27   Noho      Italian Restaurant      French Restaurant
28   Roosevelt Island      Sandwich Place      Park
29   Soho      Clothing Store      Boutique
30   Stuyvesant Town      Bar      Park
31   Sutton Place      Gym / Fitness Center      Italian Restaurant
32   Tribeca      American Restaurant      Italian Restaurant
33   Tudor City      Park      Mexican Restaurant
34   Turtle Bay      Italian Restaurant      Sushi Restaurant
35   Upper East Side      Exhibit      Italian Restaurant
36   Upper West Side      Italian Restaurant      Bar
37   Washington Heights      Café      Bakery
38   West Village      Italian Restaurant      Cosmetics Shop
39   Yorkville      Coffee Shop      Bar

      3rd Most Common Venue      4th Most Common Venue      5th Most Common Venue \
0      Hotel      Wine Shop      Gym
1      Coffee Shop      Café      Yoga Studio

```

2	American Restaurant	French Restaurant	Cosmetics Shop
3	Ice Cream Shop	Nightclub	Bakery
4	American Restaurant	Dim Sum Restaurant	Vietnamese Restaurant
5	Bakery	Yoga Studio	French Restaurant
6	American Restaurant	Italian Restaurant	Gym / Fitness Center
7	Deli / Bodega	Latin American Restaurant	Thai Restaurant
8	Wine Bar	Cocktail Bar	Mexican Restaurant
9	Wine Shop	Bar	Gym
10	American Restaurant	Italian Restaurant	Yoga Studio
11	Thrift / Vintage Store	Restaurant	Cocktail Bar
12	Sushi Restaurant	Clothing Store	Chinese Restaurant
13	Café	Pizza Place	Bakery
14	Hotel	American Restaurant	Gym / Fitness Center
15	Pizza Place	Café	Bakery
16	Sushi Restaurant	Pizza Place	Gym / Fitness Center
17	Italian Restaurant	Plaza	Concert Hall
18	Yoga Studio	Cocktail Bar	Bubble Tea Shop
19	Ramen Restaurant	Pizza Place	Japanese Restaurant
20	Bar	Thai Restaurant	Szechuan Restaurant
21	Mexican Restaurant	Chinese Restaurant	Seafood Restaurant
22	Yoga Studio	Supplement Shop	Steakhouse
23	Steakhouse	Coffee Shop	Sporting Goods Shop
24	Hotel Bar	Coffee Shop	Bakery
25	Bookstore	American Restaurant	Food Truck
26	Spa	Bar	Japanese Restaurant
27	Cocktail Bar	American Restaurant	Sushi Restaurant
28	Rental Car Location	Bus Station	Farmers Market
29	Women's Store	Shoe Store	Men's Store
30	Baseball Field	Heliport	Gas Station
31	Furniture / Home Store	Indian Restaurant	American Restaurant
32	Café	Park	Spa
33	Greek Restaurant	Pizza Place	Café
34	Coffee Shop	Steakhouse	Hotel
35	Coffee Shop	Art Gallery	Bakery
36	Bakery	Indian Restaurant	Coffee Shop
37	Sandwich Place	Mobile Phone Shop	Pizza Place
38	New American Restaurant	Gastropub	Wine Bar
39	Gym	Italian Restaurant	Pizza Place

	6th Most Common Venue	7th Most Common Venue \
0	Italian Restaurant	Women's Store
1	Gym	French Restaurant
2	Art Gallery	Seafood Restaurant
3	Seafood Restaurant	Hotel
4	Bakery	Noodle House
5	Spa	Sandwich Place
6	Indie Theater	Wine Shop
7	Convenience Store	Café

8	Pizza Place	Chinese Restaurant
9	Steakhouse	Italian Restaurant
10	Japanese Restaurant	Salon / Barbershop
11	Wine Shop	Coffee Shop
12	Indian Restaurant	Boutique
13	Deli / Bodega	Cocktail Bar
14	Café	Theater
15	Deli / Bodega	Restaurant
16	Deli / Bodega	Sporting Goods Shop
17	French Restaurant	Café
18	Ice Cream Shop	Sandwich Place
19	Latin American Restaurant	Chinese Restaurant
20	Deli / Bodega	Playground
21	Japanese Curry Restaurant	Diner
22	Shopping Mall	Shoe Store
23	American Restaurant	Park
24	Gym / Fitness Center	Cocktail Bar
25	Sandwich Place	Tennis Court
26	Italian Restaurant	French Restaurant
27	Bookstore	Coffee Shop
28	Supermarket	Outdoors & Recreation
29	Italian Restaurant	Mediterranean Restaurant
30	Harbor / Marina	Boat or Ferry
31	Bakery	Dessert Shop
32	Greek Restaurant	Gym
33	Hotel	Deli / Bodega
34	Wine Bar	Park
35	Gym / Fitness Center	Cocktail Bar
36	Vegetarian / Vegan Restaurant	Cosmetics Shop
37	Clothing Store	Tapas Restaurant
38	Jazz Club	Park
39	Sushi Restaurant	Mexican Restaurant

8th Most Common Venue	9th Most Common Venue \
0 Burger Joint	Pizza Place
1 Bookstore	Bar
2 Bookstore	Gym / Fitness Center
3 Art Gallery	Theater
4 Hotpot Restaurant	Ice Cream Shop
5 Cocktail Bar	Coffee Shop
6 Spa	Hotel
7 Taco Place	French Restaurant
8 Coffee Shop	Vegetarian / Vegan Restaurant
9 Pizza Place	Park
10 Clothing Store	Cosmetics Shop
11 Mexican Restaurant	American Restaurant
12 Café	Seafood Restaurant
13 Sandwich Place	School



14	Dog Run	Restaurant
15	Park	Chinese Restaurant
16	Burger Joint	Gym
17	Indie Movie Theater	Opera House
18	Salon / Barbershop	Chinese Restaurant
19	Sandwich Place	Bakery
20	Mexican Restaurant	Yoga Studio
21	Sushi Restaurant	Supermarket
22	Seafood Restaurant	Sandwich Place
23	Spa	Bakery
24	Hotel	Japanese Restaurant
25	Café	Deli / Bodega
26	Gym	Burger Joint
27	Gift Shop	Grocery Store
28	Metro Station	Dry Cleaner
29	Art Gallery	Salon / Barbershop
30	Playground	Pet Service
31	Juice Bar	Yoga Studio
32	Boutique	Coffee Shop
33	Diner	Dog Run
34	Japanese Restaurant	Noodle House
35	French Restaurant	Hotel
36	Wine Bar	Pub
37	Donut Shop	Supermarket
38	American Restaurant	Bakery
39	Japanese Restaurant	Deli / Bodega

	10th Most Common Venue
0	Beer Garden
1	Japanese Restaurant
2	Gym
3	American Restaurant
4	Salon / Barbershop
5	Park
6	Gym
7	Street Art
8	Speakeasy
9	Food Truck
10	Cycle Studio
11	Pizza Place
12	Electronics Store
13	Chinese Restaurant
14	Park
15	Spanish Restaurant
16	Cosmetics Shop
17	Park
18	Seafood Restaurant
19	Cocktail Bar

```

20         Chinese Restaurant
21         Spanish Restaurant
22             Pizza Place
23             Bookstore
24         Italian Restaurant
25             Burger Joint
26         Gym / Fitness Center
27         Mexican Restaurant
28             Dog Run
29         Seafood Restaurant
30             Cocktail Bar
31         Sushi Restaurant
32             Wine Bar
33         Asian Restaurant
34         French Restaurant
35             Boutique
36         Sushi Restaurant
37 Latin American Restaurant
38         French Restaurant
39             Park

```

## 0.6 4. Cluster Neighborhoods

Run  $k$ -means to cluster the neighborhood into 5 clusters.

```

In [40]: # set number of clusters
kclusters = 5

manhattan_grouped_clustering = manhattan_grouped.drop('Neighborhood', 1)

# run k-means clustering
kmeans = KMeans(n_clusters=kclusters, random_state=0).fit(manhattan_grouped_clustering)

# check cluster labels generated for each row in the dataframe
kmeans.labels_[0:10]

```

```

Out[40]: array([1, 1, 2, 2, 2, 2, 0, 1, 1], dtype=int32)

```

Let's create a new dataframe that includes the cluster as well as the top 10 venues for each neighborhood.

```

In [41]: manhattan_merged = manhattan_data

# add clustering labels
manhattan_merged['Cluster Labels'] = kmeans.labels_

# merge toronto_grouped with toronto_data to add latitude/longitude for each neighborhood
manhattan_merged = manhattan_merged.join(neighborhoods_venues_sorted.set_index('Neighborhood', drop=True))

manhattan_merged.head() # check the last columns!

```

```

Out[41]:      Borough      Neighborhood  Latitude  Longitude  Cluster Labels  \
0  Manhattan      Marble Hill  40.876551  -73.910660          1
1  Manhattan      Chinatown  40.715618  -73.994279          1
2  Manhattan  Washington Heights  40.851903  -73.936900          2
3  Manhattan      Inwood  40.867684  -73.921210          2
4  Manhattan  Hamilton Heights  40.823604  -73.949688          2

      1st Most Common Venue  2nd Most Common Venue  3rd Most Common Venue  \
0      Coffee Shop      Discount Store      Yoga Studio
1  Chinese Restaurant      Cocktail Bar  American Restaurant
2      Café      Bakery      Sandwich Place
3  Mexican Restaurant      Lounge      Pizza Place
4  Mexican Restaurant      Coffee Shop      Café

      4th Most Common Venue  5th Most Common Venue  6th Most Common Venue  \
0      Supplement Shop      Steakhouse      Shopping Mall
1  Dim Sum Restaurant  Vietnamese Restaurant      Bakery
2  Mobile Phone Shop      Pizza Place      Clothing Store
3      Café      Bakery      Deli / Bodega
4      Pizza Place      Bakery      Deli / Bodega

      7th Most Common Venue  8th Most Common Venue  9th Most Common Venue  \
0      Shoe Store      Seafood Restaurant      Sandwich Place
1      Noodle House      Hotpot Restaurant      Ice Cream Shop
2  Tapas Restaurant      Donut Shop      Supermarket
3      Restaurant      Park      Chinese Restaurant
4      Cocktail Bar      Sandwich Place      School

      10th Most Common Venue
0      Pizza Place
1      Salon / Barbershop
2  Latin American Restaurant
3      Spanish Restaurant
4      Chinese Restaurant

```

Finally, let's visualize the resulting clusters

```

In [42]: # create map
map_clusters = folium.Map(location=[latitude, longitude], zoom_start=11)

# set color scheme for the clusters
x = np.arange(kclusters)
ys = [i+x+(i*x)**2 for i in range(kclusters)]
colors_array = cm.rainbow(np.linspace(0, 1, len(ys)))
rainbow = [colors.rgb2hex(i) for i in colors_array]

# add markers to the map
markers_colors = []

```

```

for lat, lon, poi, cluster in zip(manhattan_merged['Latitude'], manhattan_merged['Longitude'],
    label = folium.Popup(str(poi) + ' Cluster ' + str(cluster), parse_html=True)
    folium.CircleMarker(
        [lat, lon],
        radius=5,
        popup=label,
        color=rainbow[cluster-1],
        fill=True,
        fill_color=rainbow[cluster-1],
        fill_opacity=0.7).add_to(map_clusters)

map_clusters

```

Out[42]: <folium.folium.Map at 0x7f38e060be48>

## 0.7 5. Examine Clusters

Now, you can examine each cluster and determine the discriminating venue categories that distinguish each cluster. Based on the defining categories, you can then assign a name to each cluster. I will leave this exercise to you.

### Cluster 1

In [43]: manhattan\_merged.loc[manhattan\_merged['Cluster Labels'] == 0, manhattan\_merged.columns]

```

Out[43]:
      Neighborhood 1st Most Common Venue 2nd Most Common Venue \
7      East Harlem      Mexican Restaurant      Bakery
13    Lincoln Square      Theater  Gym / Fitness Center
15      Midtown      Hotel      Theater
37  Stuyvesant Town      Bar      Park

      3rd Most Common Venue      4th Most Common Venue 5th Most Common Venue \
7      Deli / Bodega  Latin American Restaurant      Thai Restaurant
13    Italian Restaurant      Plaza      Concert Hall
15      Steakhouse      Coffee Shop  Sporting Goods Shop
37      Baseball Field      Heliport      Gas Station

      6th Most Common Venue 7th Most Common Venue 8th Most Common Venue \
7      Convenience Store      Café      Taco Place
13    French Restaurant      Café  Indie Movie Theater
15    American Restaurant      Park      Spa
37      Harbor / Marina      Boat or Ferry      Playground

      9th Most Common Venue 10th Most Common Venue
7      French Restaurant      Street Art
13      Opera House      Park
15      Bakery      Bookstore
37      Pet Service      Cocktail Bar

```

## Cluster 2

In [44]: manhattan\_merged.loc[manhattan\_merged['Cluster Labels'] == 1, manhattan\_merged.columns]

```
Out[44]:
```

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	\
0	Marble Hill	Coffee Shop	Discount Store	
1	Chinatown	Chinese Restaurant	Cocktail Bar	
8	Upper East Side	Exhibit	Italian Restaurant	
9	Yorkville	Coffee Shop	Bar	
11	Roosevelt Island	Sandwich Place	Park	
16	Murray Hill	Hotel	Sandwich Place	
20	Lower East Side	Café	Coffee Shop	
21	Tribeca	American Restaurant	Italian Restaurant	
22	Little Italy	Bakery	Café	
25	Manhattan Valley	Coffee Shop	Pizza Place	
33	Midtown South	Korean Restaurant	Cosmetics Shop	
34	Sutton Place	Gym / Fitness Center	Italian Restaurant	
36	Tudor City	Park	Mexican Restaurant	
39	Hudson Yards	Coffee Shop	Italian Restaurant	

  

	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	\
0	Yoga Studio	Supplement Shop	Steakhouse	
1	American Restaurant	Dim Sum Restaurant	Vietnamese Restaurant	
8	Coffee Shop	Art Gallery	Bakery	
9	Gym	Italian Restaurant	Pizza Place	
11	Rental Car Location	Bus Station	Farmers Market	
16	Spa	Bar	Japanese Restaurant	
20	Ramen Restaurant	Pizza Place	Japanese Restaurant	
21	Café	Park	Spa	
22	Yoga Studio	Cocktail Bar	Bubble Tea Shop	
25	Bar	Thai Restaurant	Szechuan Restaurant	
33	Hotel Bar	Coffee Shop	Bakery	
34	Furniture / Home Store	Indian Restaurant	American Restaurant	
36	Greek Restaurant	Pizza Place	Café	
39	Hotel	American Restaurant	Gym / Fitness Center	

  

	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	\
0	Shopping Mall	Shoe Store	Seafood Restaurant	
1	Bakery	Noodle House	Hotpot Restaurant	
8	Gym / Fitness Center	Cocktail Bar	French Restaurant	
9	Sushi Restaurant	Mexican Restaurant	Japanese Restaurant	
11	Supermarket	Outdoors & Recreation	Metro Station	
16	Italian Restaurant	French Restaurant	Gym	
20	Latin American Restaurant	Chinese Restaurant	Sandwich Place	
21	Greek Restaurant	Gym	Boutique	
22	Ice Cream Shop	Sandwich Place	Salon / Barbershop	
25	Deli / Bodega	Playground	Mexican Restaurant	
33	Gym / Fitness Center	Cocktail Bar	Hotel	
34	Bakery	Dessert Shop	Juice Bar	

36		Hotel		Deli / Bodega		Diner
39		Café		Theater		Dog Run
	9th Most Common Venue		10th Most Common Venue			
0	Sandwich Place		Pizza Place			
1	Ice Cream Shop		Salon / Barbershop			
8	Hotel		Boutique			
9	Deli / Bodega		Park			
11	Dry Cleaner		Dog Run			
16	Burger Joint		Gym / Fitness Center			
20	Bakery		Cocktail Bar			
21	Coffee Shop		Wine Bar			
22	Chinese Restaurant		Seafood Restaurant			
25	Yoga Studio		Chinese Restaurant			
33	Japanese Restaurant		Italian Restaurant			
34	Yoga Studio		Sushi Restaurant			
36	Dog Run		Asian Restaurant			
39	Restaurant		Park			

### Cluster 3

In [45]: manhattan\_merged.loc[manhattan\_merged['Cluster Labels'] == 2, manhattan\_merged.columns]

Out[45]:	Neighborhood	1st Most Common Venue	2nd Most Common Venue	\
2	Washington Heights	Café	Bakery	
3	Inwood	Mexican Restaurant	Lounge	
4	Hamilton Heights	Mexican Restaurant	Coffee Shop	
5	Manhattanville	Deli / Bodega	Italian Restaurant	
6	Central Harlem	African Restaurant	Chinese Restaurant	
10	Lenox Hill	Italian Restaurant	Coffee Shop	
12	Upper West Side	Italian Restaurant	Bar	
14	Clinton	Theater	Coffee Shop	
17	Chelsea	Coffee Shop	Italian Restaurant	
18	Greenwich Village	Italian Restaurant	French Restaurant	
19	East Village	Ice Cream Shop	Bar	
23	Soho	Clothing Store	Boutique	
24	West Village	Italian Restaurant	Cosmetics Shop	
26	Morningside Heights	Coffee Shop	Park	
27	Gramercy	Italian Restaurant	Bagel Shop	
29	Financial District	Coffee Shop	Hotel	
31	Noho	Italian Restaurant	French Restaurant	
32	Civic Center	Gym / Fitness Center	Italian Restaurant	
35	Turtle Bay	Italian Restaurant	Sushi Restaurant	
38	Flatiron	Gym / Fitness Center	Gym	
	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	\
2	Sandwich Place	Mobile Phone Shop	Pizza Place	
3	Pizza Place	Café	Bakery	

4	Café	Pizza Place	Bakery
5	Mexican Restaurant	Chinese Restaurant	Seafood Restaurant
6	American Restaurant	French Restaurant	Cosmetics Shop
10	Sushi Restaurant	Pizza Place	Gym / Fitness Center
12	Bakery	Indian Restaurant	Coffee Shop
14	American Restaurant	Italian Restaurant	Gym / Fitness Center
17	Ice Cream Shop	Nightclub	Bakery
18	Sushi Restaurant	Clothing Store	Chinese Restaurant
19	Wine Bar	Cocktail Bar	Mexican Restaurant
23	Women's Store	Shoe Store	Men's Store
24	New American Restaurant	Gastropub	Wine Bar
26	Bookstore	American Restaurant	Food Truck
27	Thrift / Vintage Store	Restaurant	Cocktail Bar
29	Wine Shop	Bar	Gym
31	Cocktail Bar	American Restaurant	Sushi Restaurant
32	Bakery	Yoga Studio	French Restaurant
35	Coffee Shop	Steakhouse	Hotel
38	American Restaurant	Italian Restaurant	Yoga Studio

	6th Most Common Venue	7th Most Common Venue \
2	Clothing Store	Tapas Restaurant
3	Deli / Bodega	Restaurant
4	Deli / Bodega	Cocktail Bar
5	Japanese Curry Restaurant	Diner
6	Art Gallery	Seafood Restaurant
10	Deli / Bodega	Sporting Goods Shop
12	Vegetarian / Vegan Restaurant	Cosmetics Shop
14	Indie Theater	Wine Shop
17	Seafood Restaurant	Hotel
18	Indian Restaurant	Boutique
19	Pizza Place	Chinese Restaurant
23	Italian Restaurant	Mediterranean Restaurant
24	Jazz Club	Park
26	Sandwich Place	Tennis Court
27	Wine Shop	Coffee Shop
29	Steakhouse	Italian Restaurant
31	Bookstore	Coffee Shop
32	Spa	Sandwich Place
35	Wine Bar	Park
38	Japanese Restaurant	Salon / Barbershop

	8th Most Common Venue	9th Most Common Venue \
2	Donut Shop	Supermarket
3	Park	Chinese Restaurant
4	Sandwich Place	School
5	Sushi Restaurant	Supermarket
6	Bookstore	Gym / Fitness Center
10	Burger Joint	Gym

12	Wine Bar	Pub
14	Spa	Hotel
17	Art Gallery	Theater
18	Café	Seafood Restaurant
19	Coffee Shop	Vegetarian / Vegan Restaurant
23	Art Gallery	Salon / Barbershop
24	American Restaurant	Bakery
26	Café	Deli / Bodega
27	Mexican Restaurant	American Restaurant
29	Pizza Place	Park
31	Gift Shop	Grocery Store
32	Cocktail Bar	Coffee Shop
35	Japanese Restaurant	Noodle House
38	Clothing Store	Cosmetics Shop

	10th Most Common Venue
2	Latin American Restaurant
3	Spanish Restaurant
4	Chinese Restaurant
5	Spanish Restaurant
6	Gym
10	Cosmetics Shop
12	Sushi Restaurant
14	Gym
17	American Restaurant
18	Electronics Store
19	Speakeasy
23	Seafood Restaurant
24	French Restaurant
26	Burger Joint
27	Pizza Place
29	Food Truck
31	Mexican Restaurant
32	Park
35	French Restaurant
38	Cycle Studio

#### Cluster 4

```
In [46]: manhattan_merged.loc[manhattan_merged['Cluster Labels'] == 3, manhattan_merged.columns]
```

```
Out[46]:
```

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	\
30	Carnegie Hill	Pizza Place	Cosmetics Shop	
	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	\
30	Coffee Shop	Café	Yoga Studio	
	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	\



30	Gym	French Restaurant	Bookstore
	9th Most Common Venue	10th Most Common Venue	
30	Bar	Japanese Restaurant	

## Cluster 5

```
In [47]: manhattan_merged.loc[manhattan_merged['Cluster Labels'] == 4, manhattan_merged.columns]
```

```
Out[47]:
```

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	\
28	Battery Park City	Coffee Shop	Park	
	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	\
28	Hotel	Wine Shop	Gym	
	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	\
28	Italian Restaurant	Women's Store	Burger Joint	
	9th Most Common Venue	10th Most Common Venue		
28	Pizza Place	Beer Garden		

### 0.7.1 Thank you for completing this lab!

This notebook was created by [Alex Aklson](#). I hope you found this lab interesting and educational. Feel free to contact me if you have any questions!

This notebook is part of a course on **Coursera** called *Applied Data Science Capstone*. If you accessed this notebook outside the course, you can take this course online by clicking [here](#).

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