

The Battle of Neighborhoods

Final Report

NYC Homeless Shelter Center

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Introduction

- New York City has one of the largest homeless populations in the country. According to National Alliance to End Homelessness, NYC averages 78,604 people homeless per night in 2019, and 93.6 homeless per 10,000 people. Between 2007 to 2019, the total homeless population has increased by 56%.
- Top causes of homelessness include lack of affordable housing, unemployment, poverty, and low wages. In addition, mental illness and lack of needed services, and substance abuse and needed services.

Introduction Cont.

- There is a clear need to devote resources in aiding this community in need. A new Homeless Shelter Center will be used to coordinate services across different independent shelters across NYC. With more structure and correspondence between all shelters, it will truly make a difference for those who are in need.
- We are targeting philanthropists, social activists, community members, anyone who is willing to share their resources in making changes and advocating for others.
- The focus of this Capstone Project will be to explore the best location to open a new Homeless Shelter Center. The Center will be located at a central location that is accessible and convenient.

Data

- To find the best location for opening of a new Center, we will first identify current shelter locations. Using a list provided by Breaking Ground, we will first transform the list into usable data. Then correspond latitude and longitudinal coordinates of shelters using the Python Geocoder Package

	Shelters	Address	Zip Code
0	Grand Central Neighborhood	145 East 43rd Street New York, NY 10017	10017
1	John Heuss House	42 Beaver Street New York, NY 10004	10004
2	Olivieri Center for Women	257 West 30th Street New York, NY 10001	10001
3	The Open Door	402 W. 41st St. New York, NY 10036	10036
4	Neighborhood Center for Homeless People	237 East 77th Street New York, NY 10028	10028
5	Peter's Place	123 West 23rd Street New York, NY 10011	10011
6	Project Rescue	315 Bowery New York, NY 10003	10003
7	The Living Room	890 Garrison Avenue Bronx, NY 11201	11201
8	Bond Street Drop-In Center	39-41 Bond Street Brooklyn, NY 11201	11201
9	The Gathering Place	2402 Atlantic Avenue Brooklyn, NY 11233	11233
10	Project Hospitality Drop-In Center	25 Central Avenue Staten Island, NY 10036	10036
11	30th Street Intake	400-430 East 30th Street (Near 1st Avenue) New...	10016
12	Brooklyn Women's Shelter	116 Williams Avenue Brooklyn, NY 11217	11217
13	Franklin Shelter	1122 Franklin Avenue Bronx, NY 10456	10456
14	Jamaica Armory	93-05 168th Street Jamaica, NY 11434	11434
15	Bailey House Inc.	275 Seventh Avenue 12th Floor New York, NY 10001	10001
16	BRC Project Rescue Drop-In Center	315/317 Bowery New York, NY 10003	10003
17	Catholic Charities of The Archdiocese of New York	1011 First Avenue New York, NY 10022	10022
18	Covenant House Crisis Shelter	460 West 41st Street New York, NY 10036	10036

Data Cont.

- Next, we will create a scatter plot utilizing location coordinates. Subsequently, calculate the median latitude and longitude points to determine where this Center should be located at.

	Shelters	Address	Zip Code	Latitude	Longitude
0	Grand Central Neighborhood	145 East 43rd Street New York, NY 10017	10017	40.7517	-73.9707
1	John Heuss House	42 Beaver Street New York, NY 10004	10004	40.7143	-74.0060
2	Olivieri Center for Women	257 West 30th Street New York, NY 10001	10001	40.7484	-73.9967
3	The Open Door	402 W. 41st St. New York, NY 10036	10036	40.7597	-73.9918
4	Neighborhood Center for Homeless People	237 East 77th Street New York, NY 10028	10028	40.7763	-73.9529
5	Peter's Place	123 West 23rd Street New York, NY 10011	10011	40.7402	-73.9996
6	Project Rescue	315 Bowery New York, NY 10003	10003	40.7313	-73.9892
7	The Living Room	890 Garrison Avenue Bronx, NY 11201	11201	40.6940	-73.9903
8	Bond Street Drop-In Center	39-41 Bond Street Brooklyn, NY 11201	11201	40.6940	-73.9903
9	The Gathering Place	2402 Atlantic Avenue Brooklyn, NY 11233	11233	40.6784	-73.9211
10	Project Hospitality Drop-In Center	25 Central Avenue Staten Island, NY 10036	10036	40.7597	-73.9918
11	30th Street Intake	400-430 East 30th Street (Near 1st Avenue) New...	10016	40.7443	-73.9781
12	Brooklyn Women's Shelter	116 Williams Avenue Brooklyn, NY 11217	11217	40.6816	-73.9798
13	Franklin Shelter	1122 Franklin Avenue Bronx, NY 10456	10456	40.8316	-73.9099
14	Jamaica Armory	93-05 168th Street Jamaica, NY 11434	11434	40.6775	-73.7758
15	Bailey House Inc.	275 Seventh Avenue 12th Floor New York, NY 10001	10001	40.7484	-73.9967
16	BRC Project Rescue Drop-In Center	315/317 Bowery New York, NY 10003	10003	40.7313	-73.9892
17	Catholic Charities of The Archdiocese of New York	1011 First Avenue New York, NY 10022	10022	40.7571	-73.9657
18	Covenant House Crisis Shelter	460 West 41st Street New York, NY 10036	10036	40.7597	-73.9918

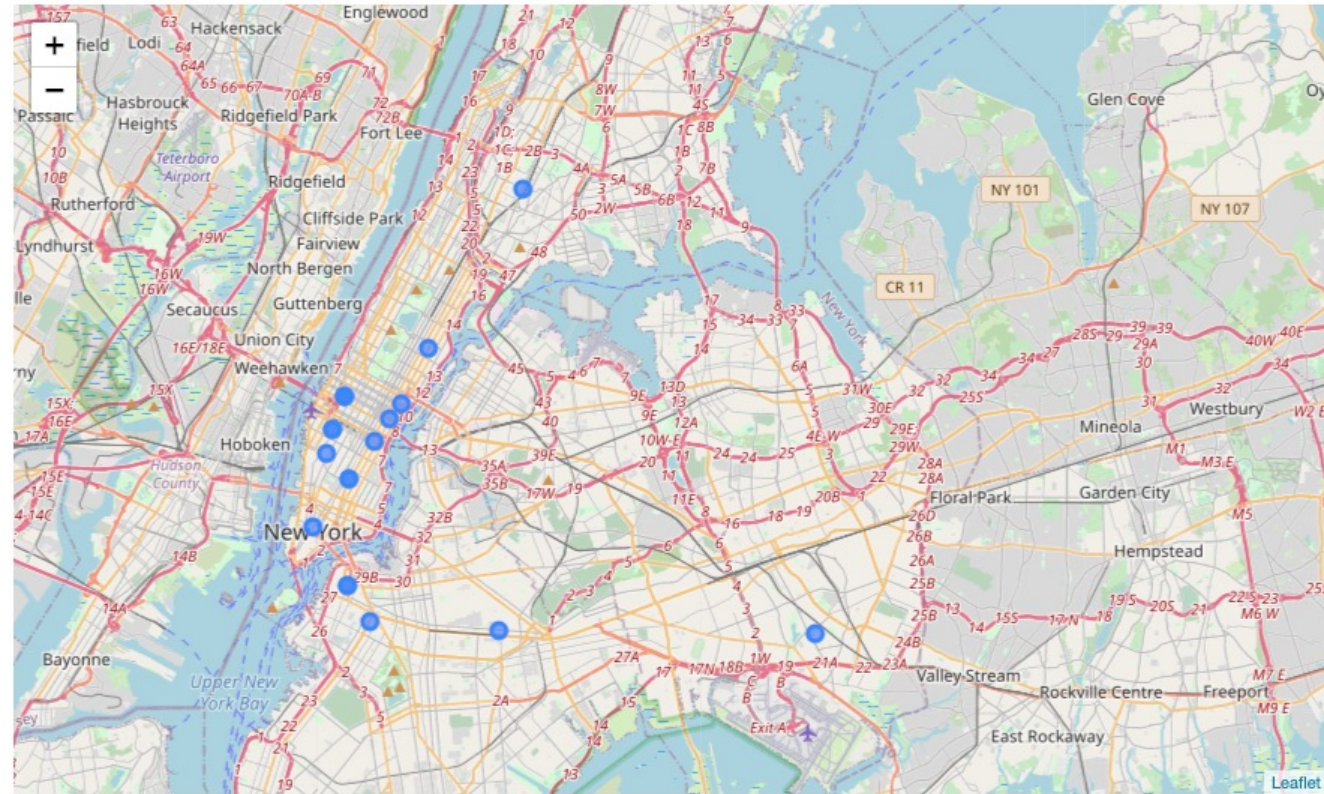
Methodology

- We are pulling data of pre-existing shelters from a list from Breaking Ground's website:
 - <https://www.nyep.uscourts.gov/reentry/NYC%20Homeless%20Shelters.pdf>
- Libraries that we will need:
 - Numpy
 - Pandas
 - Requests
 - statistics
 - bs4 (beautifulsoup)
 - folium (map)
 - geopy (coordinates)
 - matplotlib (plots)

```
import numpy as np
import pandas as pd
import requests
from bs4 import BeautifulSoup
! pip install folium==0.5.0
import folium
! pip install pgeocode
import pgeocode
from geopy.geocoders import Nominatim
import matplotlib.pyplot as plt
import matplotlib.cm as cm
import matplotlib.colors as colors
```

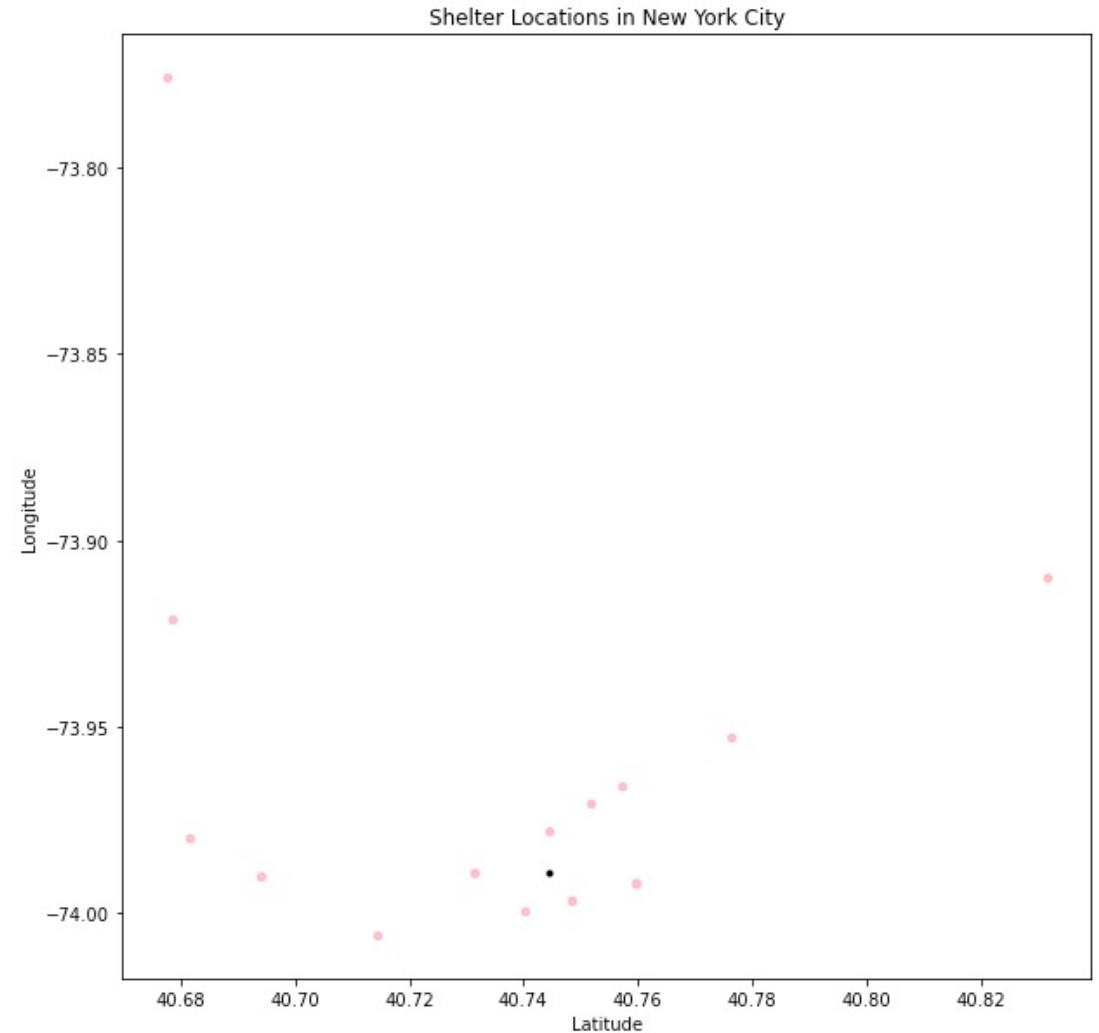
Results

- After analyzing the various locations of Homeless Shelters in New York City from a list provided by Breaking Ground, it is determined the ideal zip code of opening a Centralized Health Center for the homeless community is 10001, Chelsea neighborhood.
- This conclusion has been reached based on analyzing zip codes of shelters and their coordinates, and the median of all the locations listed.



Discussion

- Pink= shelter locations
- Black=median
- The analysis I have done here is relatively basic. To turn this idea into reality, more in-depth analysis will have to be conducted. The list of shelters that was used is also limited to 17 locations. It is possible there are more shelters available, but are sites that also provide other services, therefore not included here. It is also worth noting that most of these shelters are found in Manhattan, but other boroughs, such as Bronx, might be facing higher rates of homelessness. We should be placing these resources to act as prevention/intervention, as opposed to a late solution.



Conclusion

- New York City is one of the wealthiest states for their popularity, resources, and uniqueness. However, there are also many downsides and flaws that are overseen, such as the struggles of particular communities. The focus of this project was to examine pre-existing centers and start a new Health Center that will streamline all resources available. To make this as accessible as possible to everyone looking for help, the neighborhood that is the closest to other locations will be proven beneficial.