

Homeless Encampment Complaint

ADLEY KIM, WENJIE ZHENG, JIANWEI LI,
BORONG LYU, KEUNDEOK PARK

Introduction

- 311 Complaints
- Issue of Homelessness

complaints_311.head()

	Created Date	Closed Date	Agency Name	Complaint Type	Descriptor	Location Type	Latitude	Longitude	Location	index_right	ct2010	ctlabel
0	01/02/2013 11:56:18 AM	01/04/2013 07:51:08 AM	Department of Parks and Recreation	Overgrown Tree/Branches	Hitting Power/Phone Lines	Street	40.738351	-73.813233	POINT (-73.813233 40.738351)	1116.0	122702.0	1227.02
1	01/02/2013 12:00:00 AM	01/02/2013 12:00:00 AM	Department of Housing Preservation and Develop...	HEATING	HEAT	RESIDENTIAL BUILDING	40.850388	-73.868530	POINT (-73.8685295067 40.85038791451787)	710.0	23000.0	230.00
2	01/02/2013 12:00:00 AM	01/02/2013 12:00:00 AM	Department of Housing Preservation and Develop...	HEATING	HEAT	RESIDENTIAL BUILDING	40.836858	-73.944372	POINT (-73.94437168375893 40.8368576250211)	1632.0	24500.0	245.00
3	01/02/2013 12:00:00 AM	01/02/2013 12:00:00 AM	Department of Housing Preservation and Develop...	HEATING	HEAT	RESIDENTIAL BUILDING	40.673618	-73.960539	POINT (-73.96053939051772 40.67361783871303)	1542.0	21500.0	215.00
4	01/02/2013 06:54:35 PM	01/03/2013 05:53:45 AM	New York City Police Department	Derelict Vehicle	With License Plate	Street/Sidewalk	40.839835	-73.940666	POINT (-73.94066609671249 40.83983477127174)	259.0	83200.0	832.00

Homeless.head()

	Created Date	Closed Date	Agency Name	Complaint Type	Descriptor	Location Type	Latitude	Longitude	Location	index_right	ct2010	ctlabel	nt
22	01/02/2013 08:35:35 PM	01/02/2013 09:56:41 PM	New York City Police Department	Homeless Encampment	NaN	Street/Sidewalk	40.777463	-73.982077	POINT (-73.98207674651543 40.77746284694737)	2020.0	15700.0	157.0	
1596	09/28/2013 07:52:54 PM	09/27/2013 12:39:48 AM	New York City Police Department	Homeless Encampment	NaN	Street/Sidewalk	40.706940	-74.009006	POINT (-74.0090062482507 40.70694026781641)	1688.0	700.0	7.0	
2038	01/03/2013 05:30:00 PM	01/03/2013 06:14:53 PM	New York City Police Department	Homeless Encampment	NaN	Residential Building/House	40.691783	-73.954629	POINT (-73.95462821063782 40.69178331000919)	1153.0	24100.0	241.0	
3373	01/10/2013 01:59:10 PM	01/10/2013 05:55:55 PM	New York City Police Department	Homeless Encampment	NaN	Residential Building/House	40.871165	-73.852507	POINT (-73.85250685598929 40.87116515474988)	1444.0	34800.0	348.0	
3977	01/10/2013 08:45:46 PM	01/10/2013 11:07:15 PM	New York City Police Department	Homeless Encampment	NaN	Residential Building/House	40.794770	-73.974170	POINT (-73.97416993659566 40.79476963228884)	1620.0	18300.0	183.0	

Research Question

- Factors contribute to Homelessness.
- Statistical measures on Homeless Encampment.
- Do lower-income neighborhoods have more complaints about Homeless Encampment than higher-income neighborhoods?

311 Complaint Types

Complaint Types (n = 278)

The first level of a hierarchy identifying the topic of the incident or condition.

Complaint Geocoding

- latitude, longitude
- zip code
- borough

Meals Home Delivery Required
Water Maintenance
Sweeping/Missed-Inadequate
Damaged or Dead Tree
Illegal Animal-Sold/Kept
Foam Bam Enforcement
LEAD
ATF
Request Xmas Tree Collection
Injured Wildlife
Traffic/Illegal Parking
OEM Disabled Vehicle
Trapping Pigeon
Hazardous Material
Safety
Health
...

Data Sources

01

311 SERVICE REQUESTS
(2010 - PRESENT)

- Source: NYC Open Data Portal
- Size: 18.7m rows
- Complaint Types: 278

02

MEDIAN INCOME

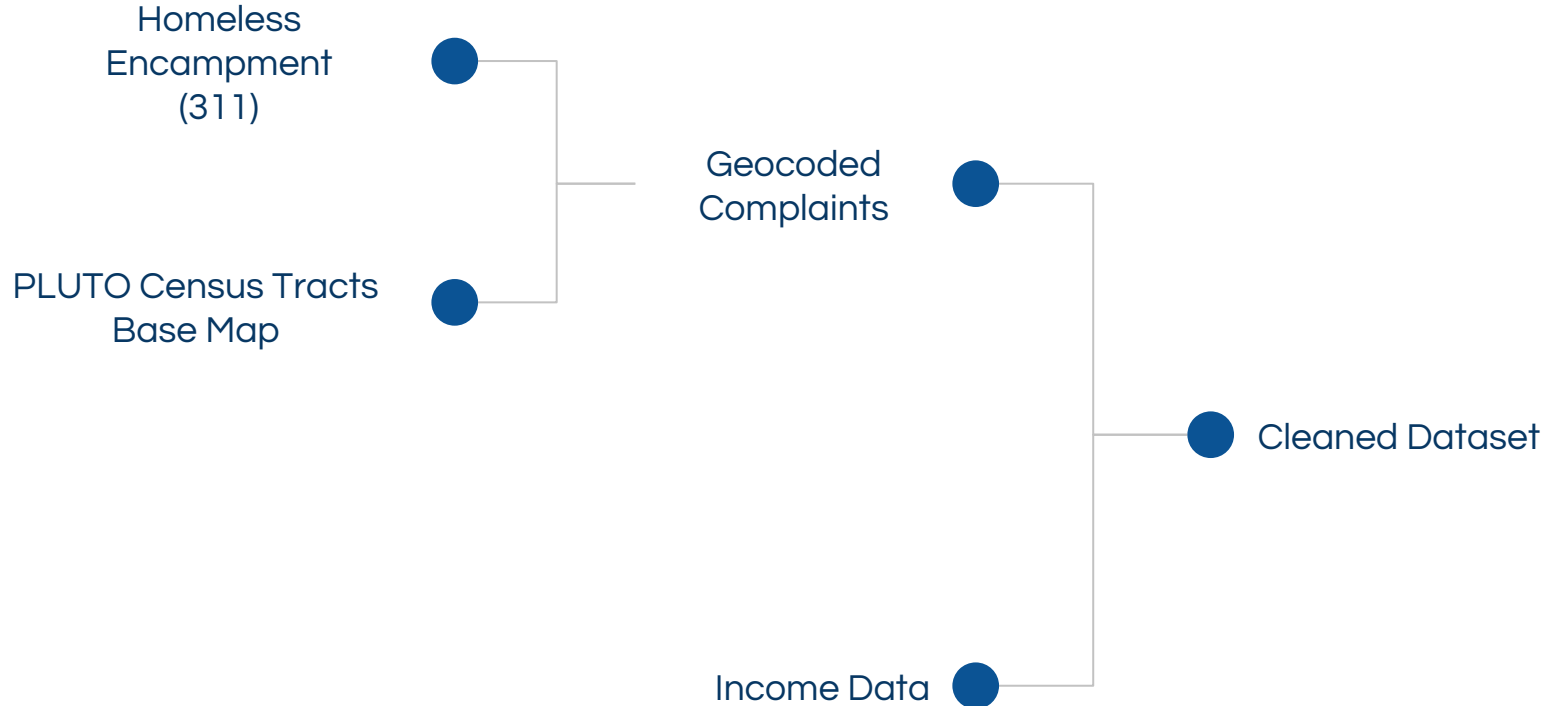
- Source: American Community Survey (2010)
- Metric: Reported Income in Past 12 Months
- Level: Census Tract

03

CENSUS TRACT

- Source: PLUTO Database
- Count: 2168
- Alias: Neighborhood Tabulation Area (NTA)

Data Processing



Public Sectors & NGO

Department of Homeless Shelter

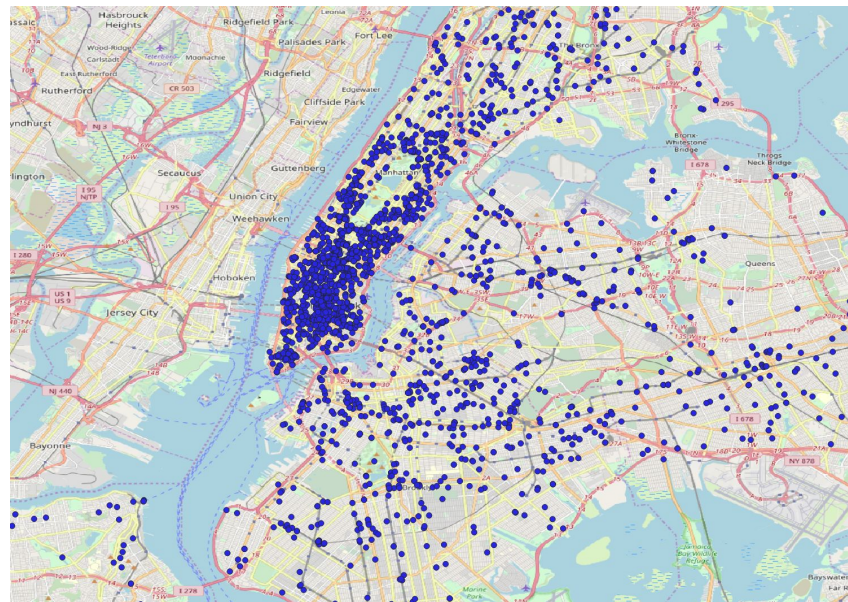
1. **HOME-STAT— Homeless Outreach & Mobile Engagement Street Action Teams**
2. **DHS Homeless Shelter Census (each year)**
3. **Directory Of Homeless Population(Per year)**
4. **Directory Of Homeless Drop- In Centers**

NGP

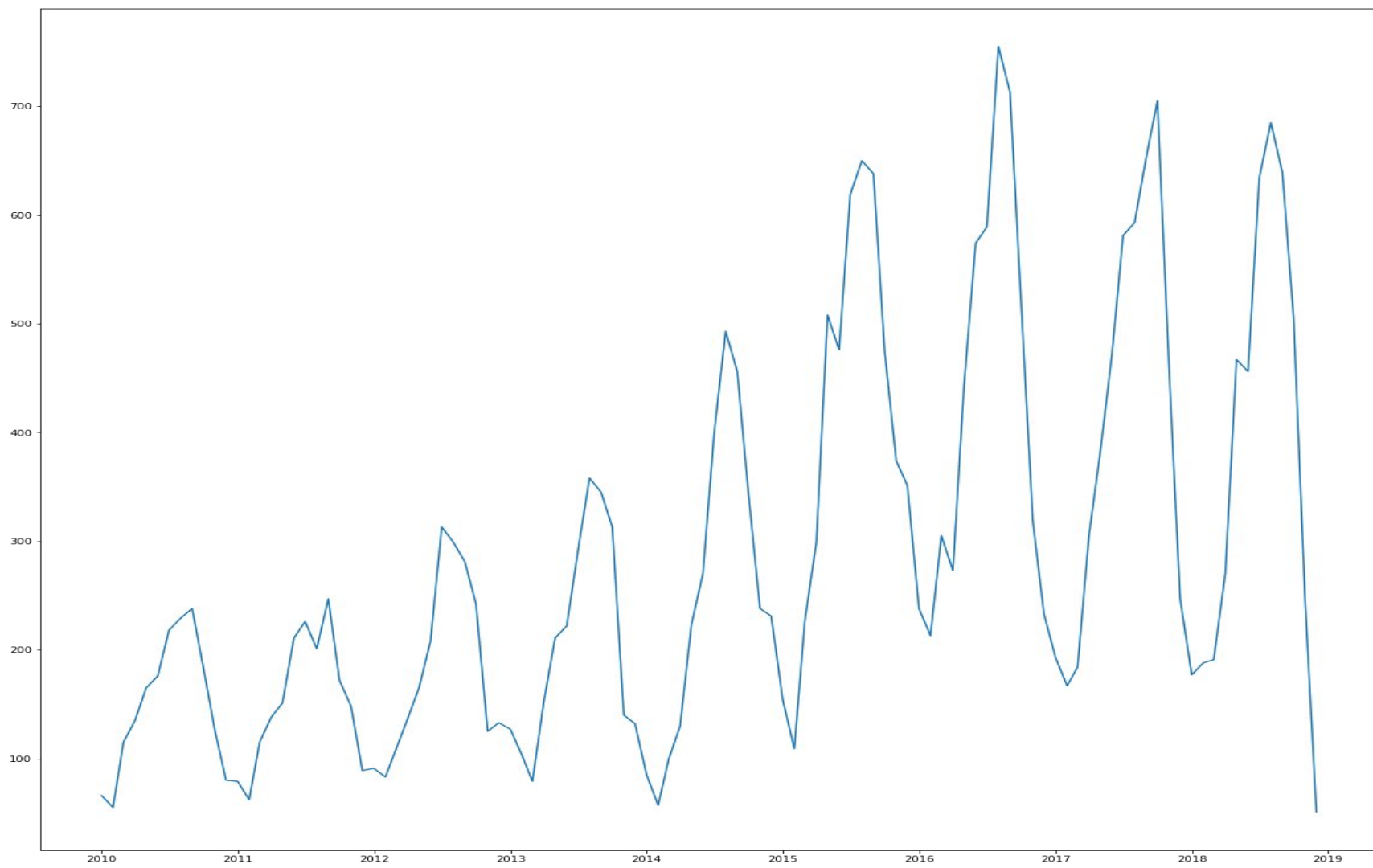
1. **Coalition of Homeless in NYC**
2. **StreetSmart App**



Summer(2011 ~ 2016, Jun., Jul., Aug.)



Winter(2011 ~ 2016, Dec., Jan., Feb.)



Questions?