311 Service Requests Team 4

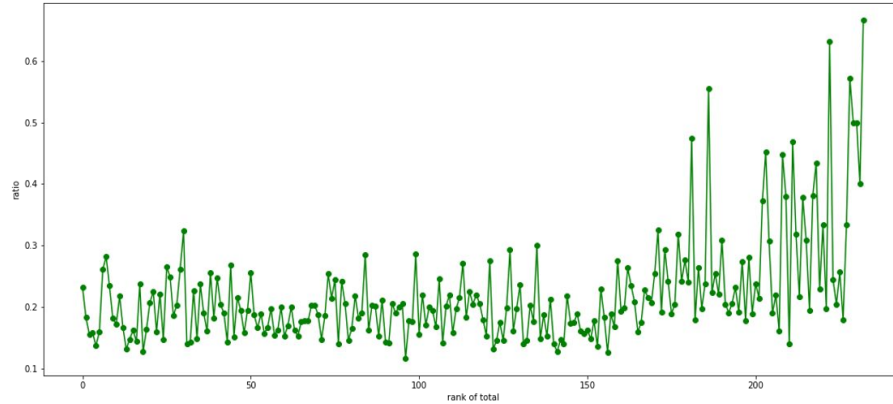Cheng-Ping Lin
Weichen Jiang
Kyran Chen

Agenda

- Overview

- Base Analysis
  - Which census tract receive most 311 requests?
  - What is the pattern of demographics and service requests: looking at census block group and social vulnerability index?
  - Is the rate of closure for different types of requests the same across different block?

- Extension Analysis

Overview

- Understand the city's response to 311 service requests by analyzing 311 data
- Understand which communities feel empowered to demand services and how the city responds
- Collect and pre-process the data from the CLIMATE READY BOSTON SOCIAL VULNERABILITY dataset and the 311 requests from the past 12 years

Data Cleaning

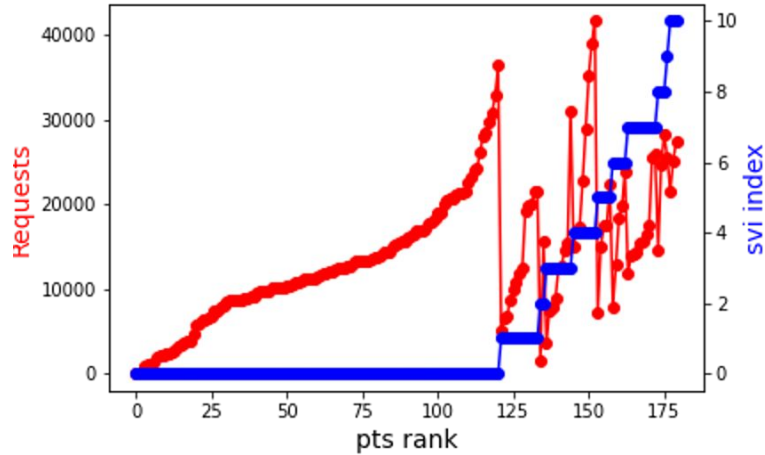The pattern between population and request ratio

CDC/ATSDR-like SVI

4
[24, [1, 1, 1, 1, 1, 3, 3]]
0.06779661016949153
[24, [1, 1, 1, 1, 1, 3, 3]]

7
[24, [1, 1, 1, 1, 1, 1, 3]]
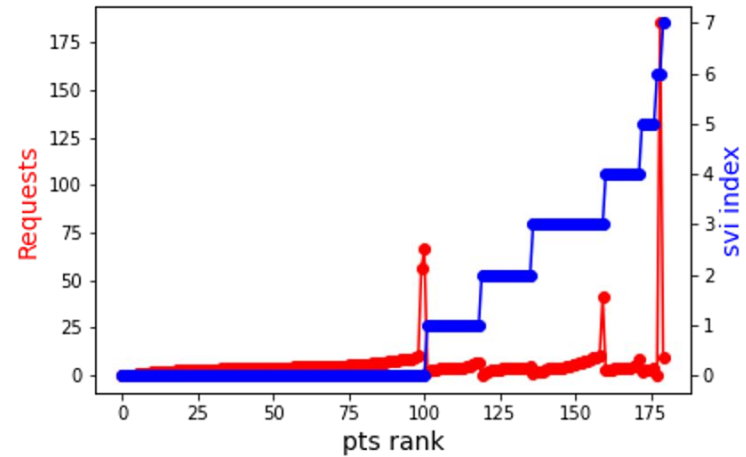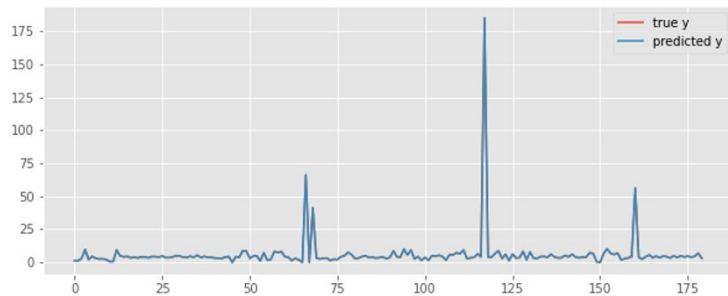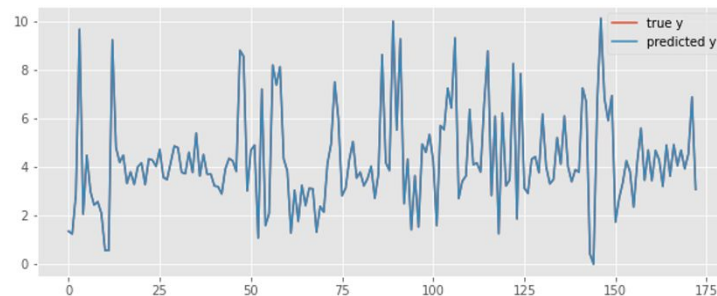0.08860759493670886
[24, [1, 1, 1, 1, 1, 1, 3]]

Best performance by CDC/ATSDR-liked SVI

Linear Regression

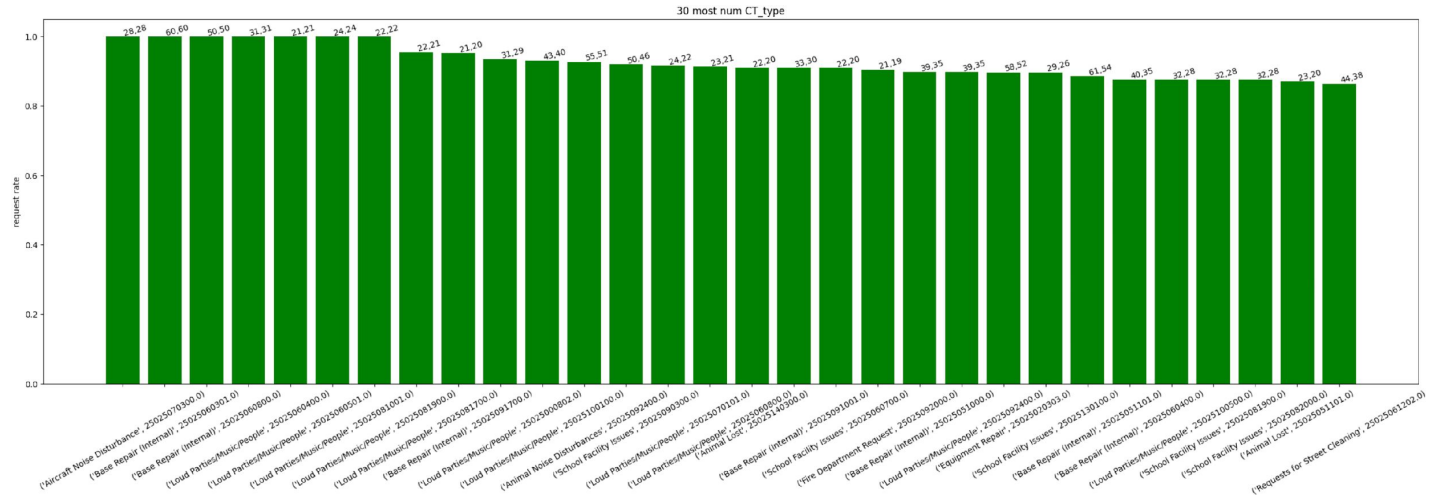old:76.1, dis:113.7, child:0.6 ,lowin:4.8, Leng:14.2, color:55.2, medical:18.7

old:6.1, dis:7.0, child:6.5, lowin:5.9, Leng:6.8, color:4.3, medical:9.8
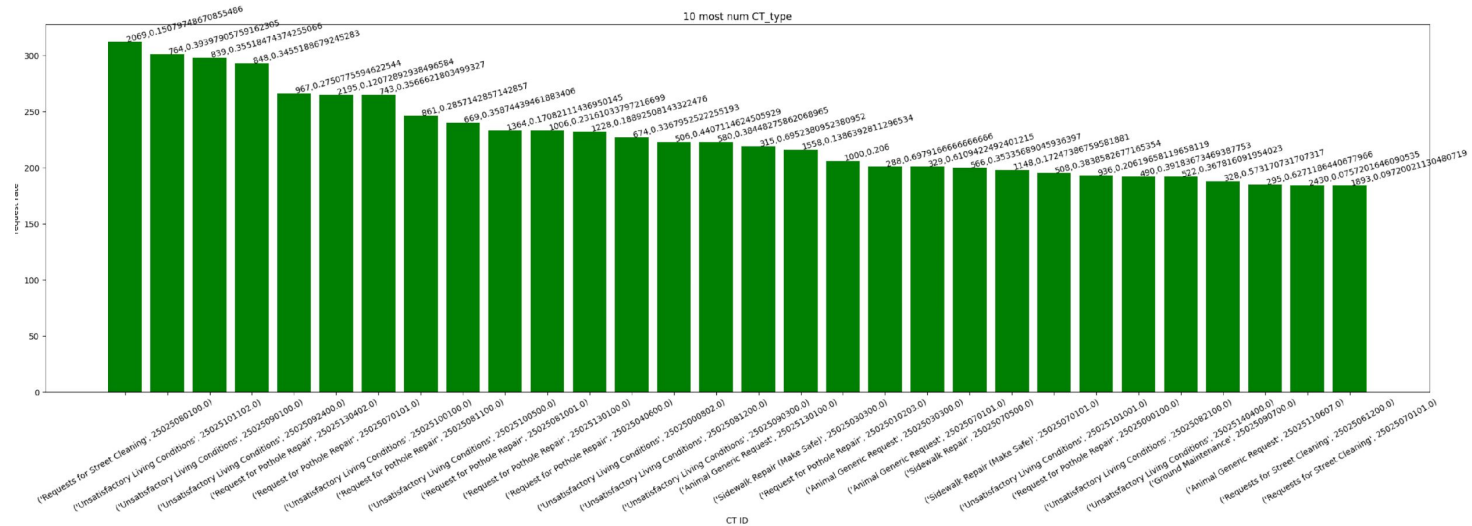
Combined visualizing CT-Type

Base Repair (Interal): 7/30, Loud Parties/Music/People: 11/30

30 CT ID_Type with more than 20 requests and with greatest ratio of unclosed cases
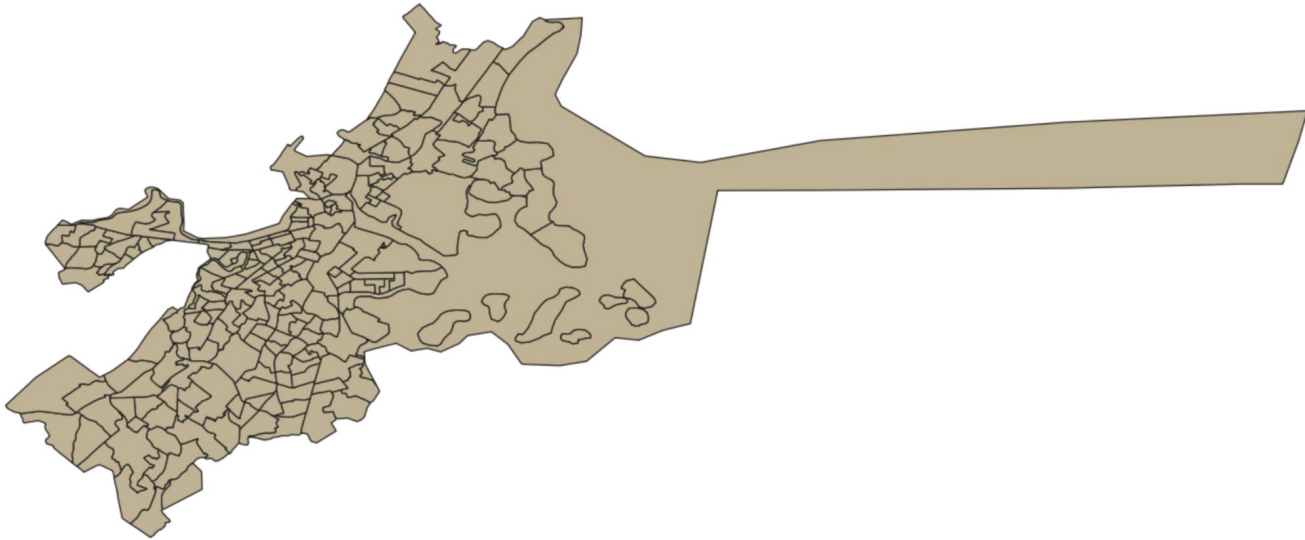
Combined visualizing CT-Type

Unsatisfactory living conditions: 12/30, Request for pothole repair: 8/30

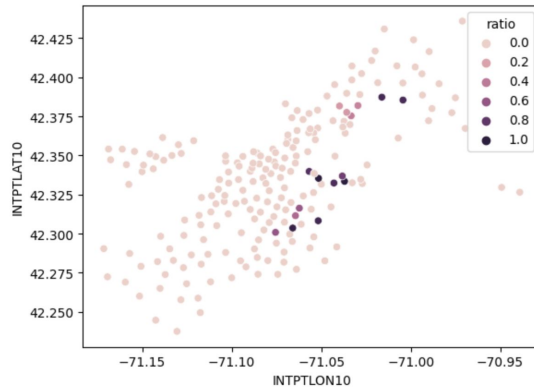Most CT ID_Type with most numbers of unclosed requests

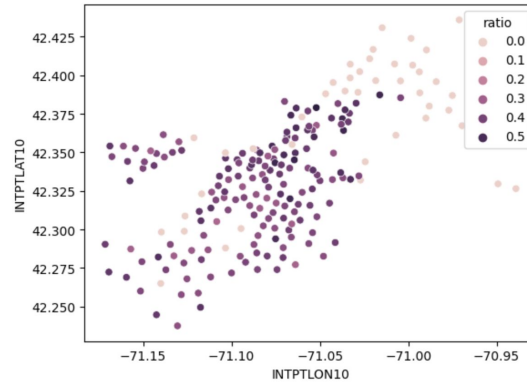# Location information

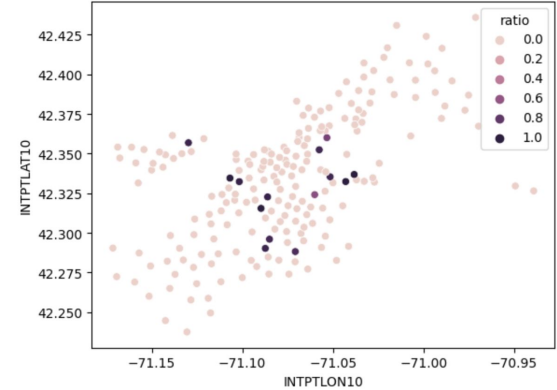Boston Census Tract map

Location_Type pattern

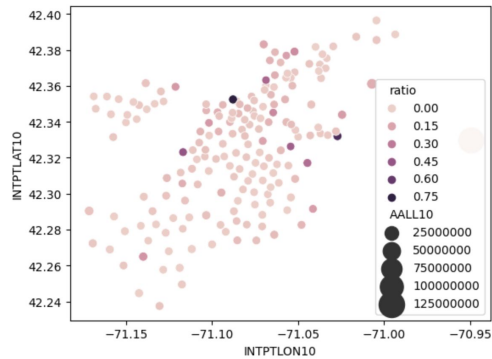Base Repair (Internal) Unsatisfactory Living Conditions Loud Parties/Music/People
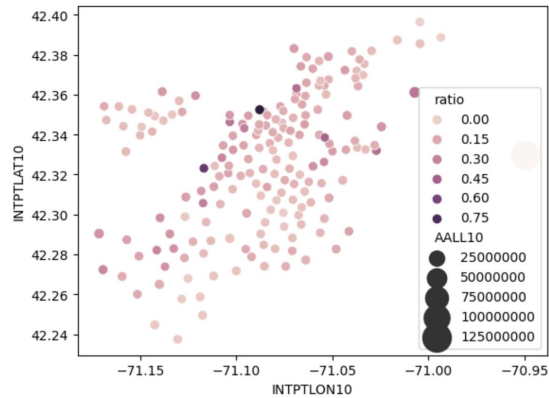

Unclosed rate-location scatter map
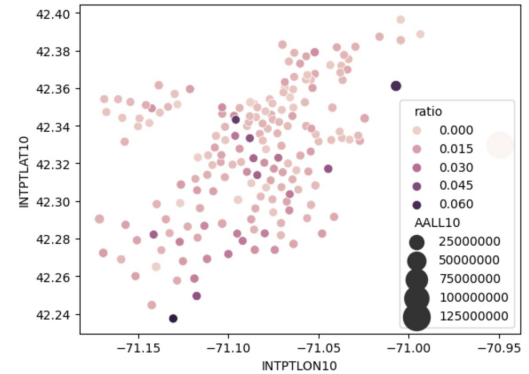
Location_Type pattern
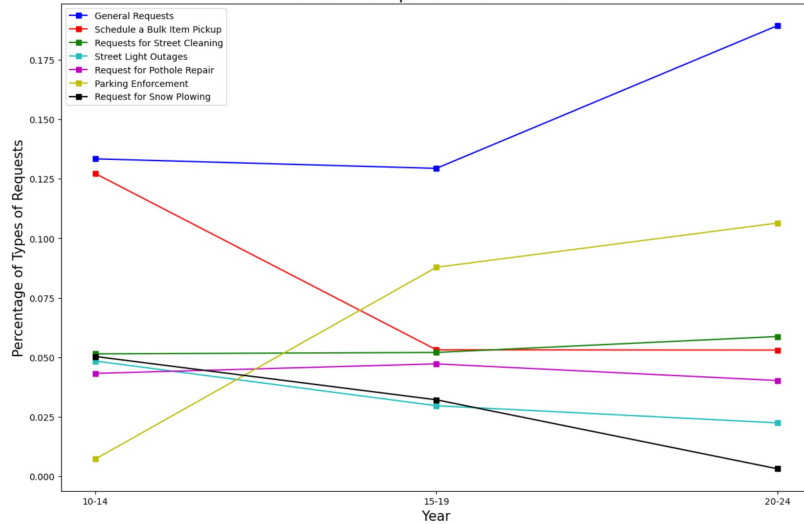
Request for Street Cleaning
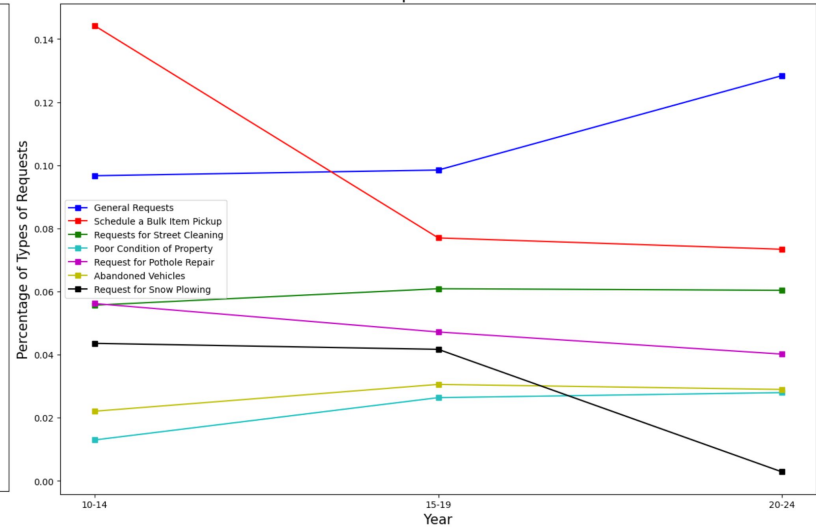
Request for Pothole Repair

Parking Enforcement

Unclosed rate-location scatter map

Extension Analysis

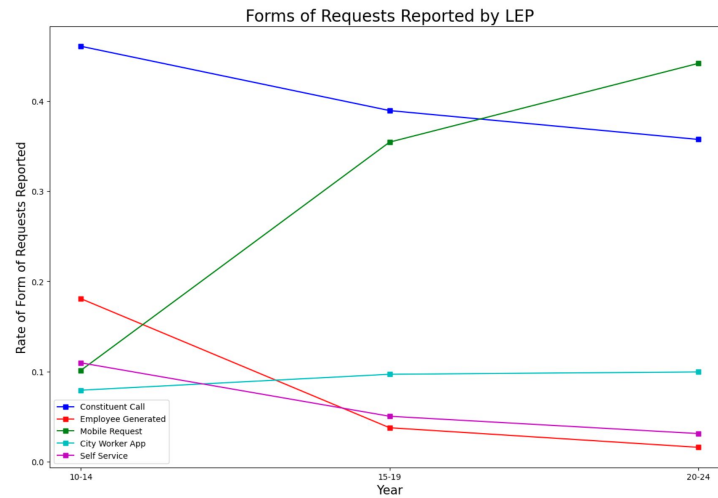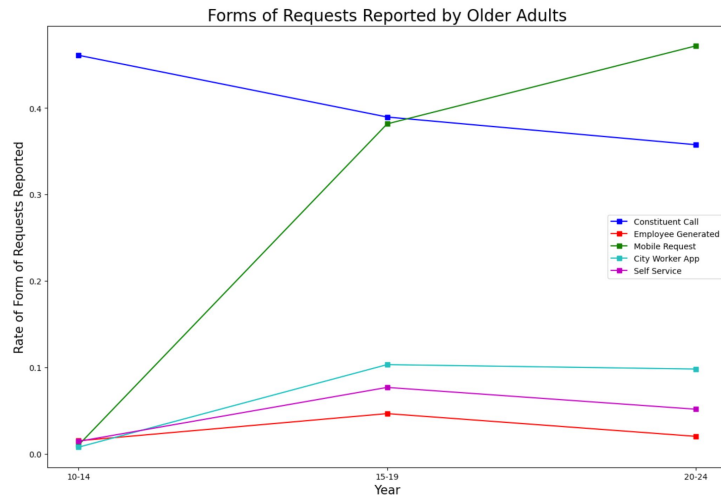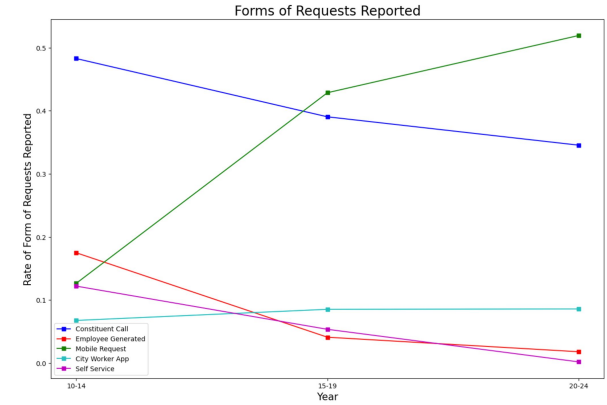Trend of Requests of Older Adult

Trend of Requests of Disabilities

Extension Analysis

Thank you for your time!