

Deliverable 1

Notes:

Social vulnerability status by location and index relation to service requests

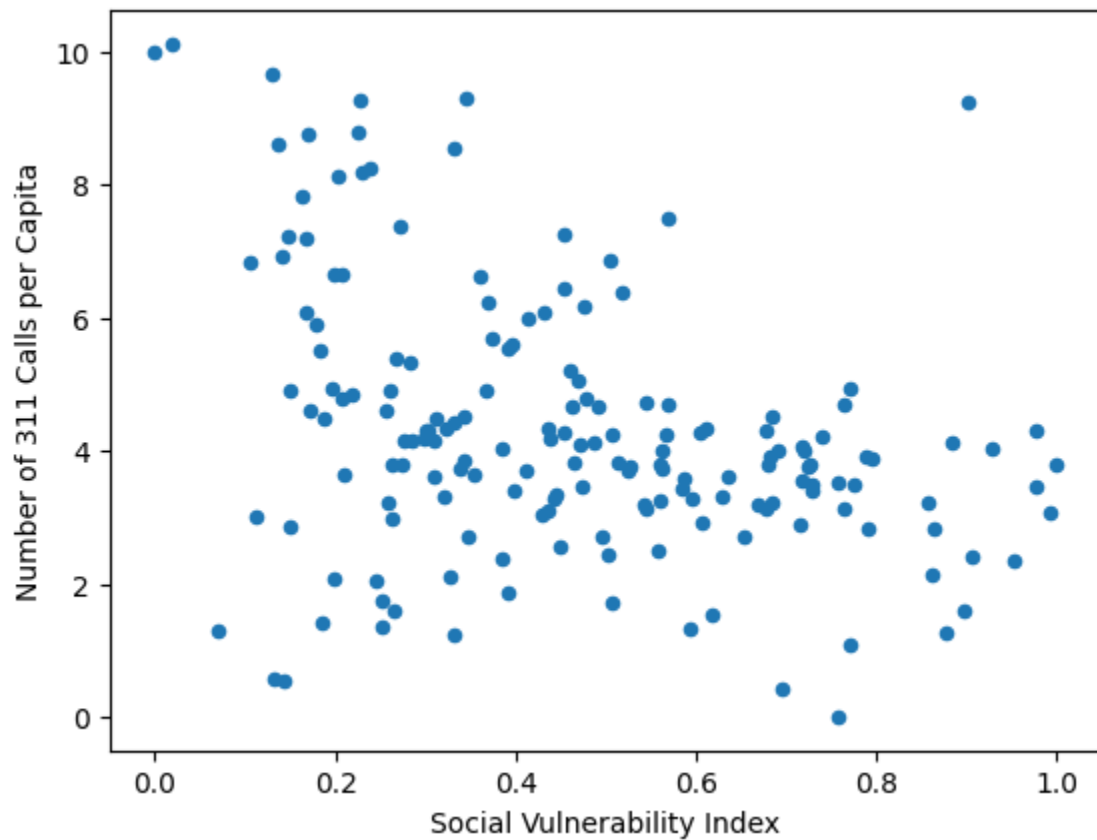
- In order to analyze the social vulnerability status of the various Boston neighborhoods, the datasets containing 311 requests (2010-2024) (source: BARI Northeastern University) were joined with the social vulnerability index dataset (source: Climate Ready Boston).
- Social vulnerability, as defined by Climate Ready Boston, is:
“the disproportionate susceptibility of some social groups to the impacts of hazards[--] including death, injury, loss or disruption of livelihood”

Furthermore, their social vulnerability dataset focuses on the following groups:

older adults, children, people of color, people with limited English proficiency, people with low/no incomes, people with disabilities, people with medical illnesses

- Assigning a social vulnerability status to each neighborhood allows us to better understand the data by analyzing the relationship between locations and how “socially vulnerable” they are with the service requests reported/responded to in the area. The higher the social vulnerability index, the more likely it is for members of the community to require more resources in order to thrive.

Results



This plot showcases the relationship between the number of 311 calls per capita (on the GEOID level) compared to the calculated social vulnerability index.

From initial analysis, it seems that communities with a lower social vulnerability index (empowered communities) tend to make 311 calls more frequently.

This initial result strongly motivates further research.

The code behind this graph is located in the deliverable 1 jupyter notebook (sp23-team-1 branch).