

Bad Landlords II: Councilor Breadon Team 1

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Introduction - Page 2

Base Analysis - Pages 3-5

Extension Analysis - Pages 5-8

Overarching Questions Answered - Pages 8-9

Work Contributed - Page 9

1 Introduction:

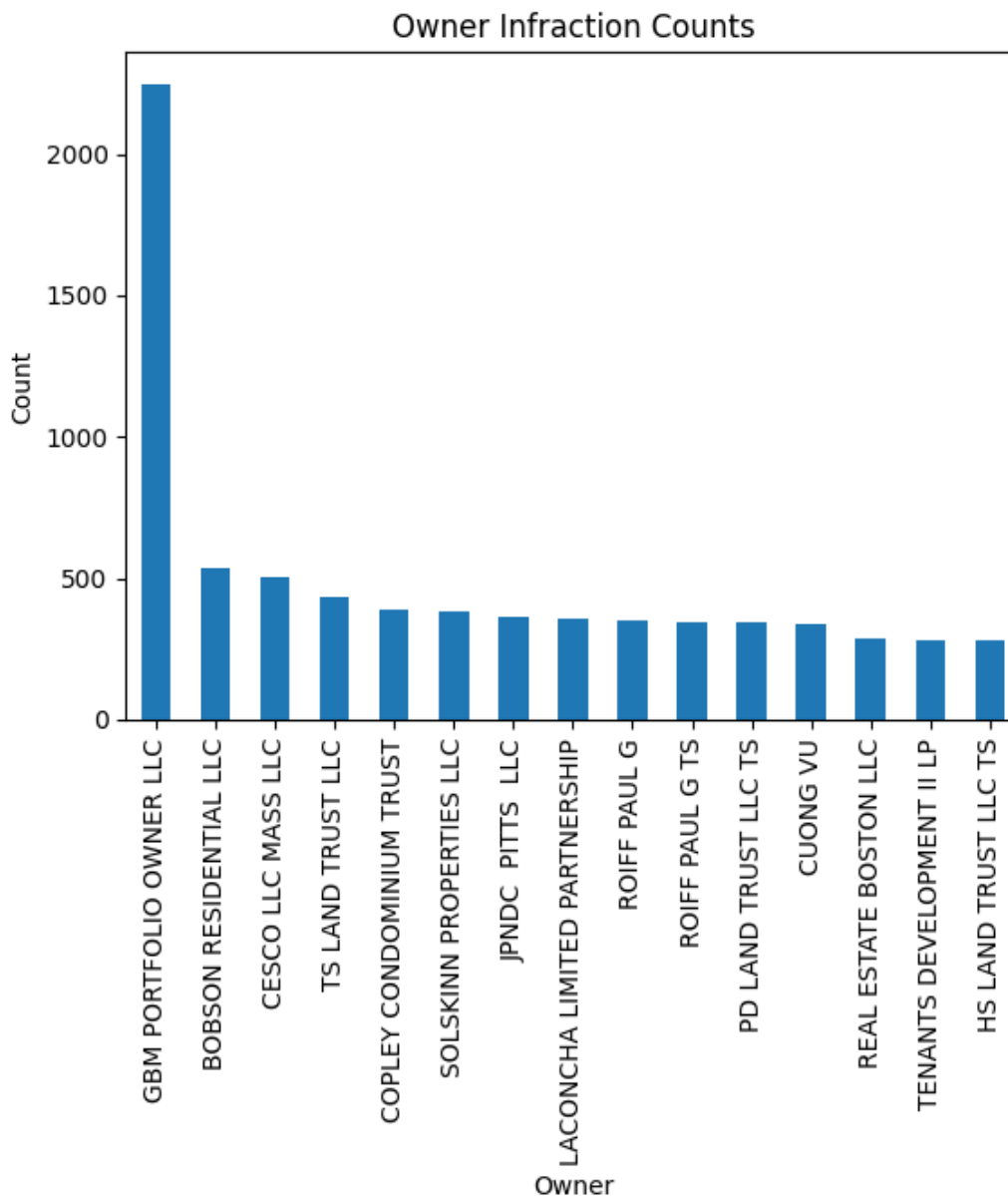
The purpose of this project is to increase the accessibility and transparency of the Boston planning, zoning, and development process so her constituents and residents across Boston can better understand the evolving landscape of the city. The end goal is to build a trackable system for Boston property violations to then determine which landlords are bad landlords.

The impact that we hope to have by the end of the semester is to provide usable data visualizations that make it possible to create a threshold for what constitutes a bad landlord. It is currently tough to classify which violations are considered extremely severe and enough to mark a landlord as bad. With the analysis we've done and have left to do, we would like to make the line a little bit clearer so as to figure out what ordinance is needed to define the threshold for the bad landlord list.

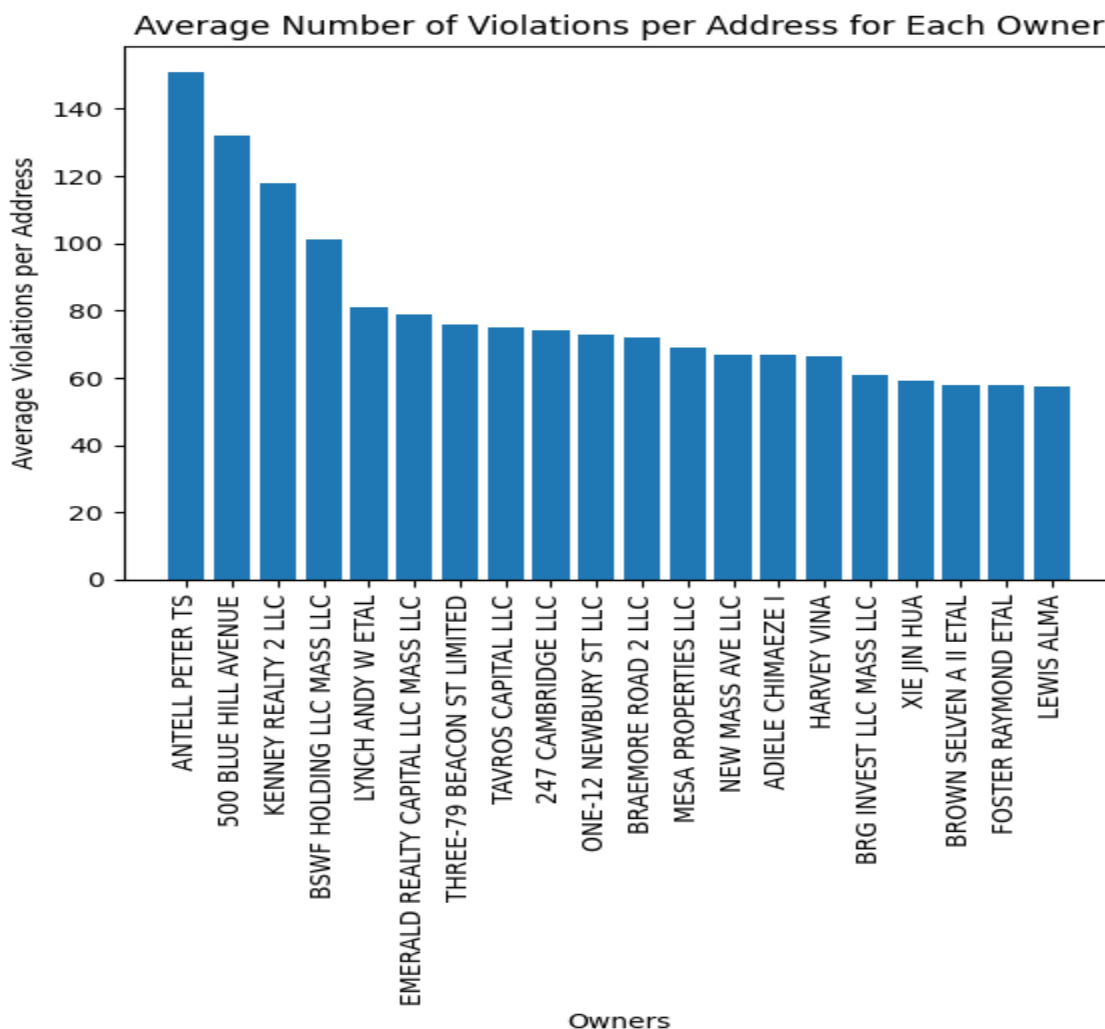
In addition to this goal, we chose to pursue an extension project in which we analyzed how different social factors influence the number and types of violations committed by landlords.

2 Base Analysis:

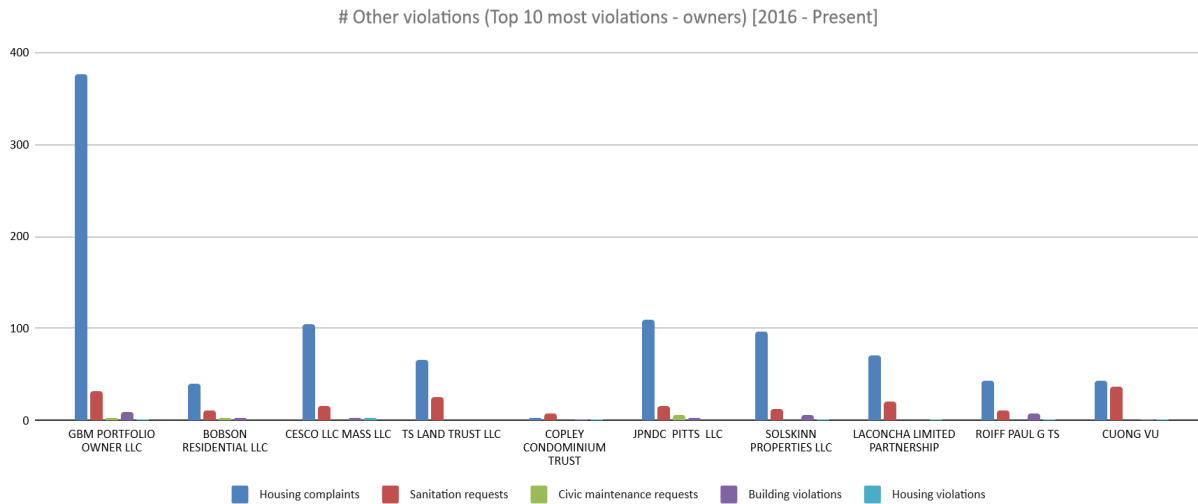
First is the Owner Infraction Count. We calculated the violation numbers of each owner. And the violation number is as follows. The x axis represents the Owner name(the name of landlord). And the y axis represents the violation number.



Then we normalize the data by each owners' address number, which means how many violations per house/apartment. We can notice that the ranking changes a lot. The x axis represents the Owner name(the name of landlord). And the y axis represents the violation number per address. This can help with the key question 1:What landlords are non-compliant? Overall volume, severe violations?



The following is the violations type statistics(this part still needs to be normalized).



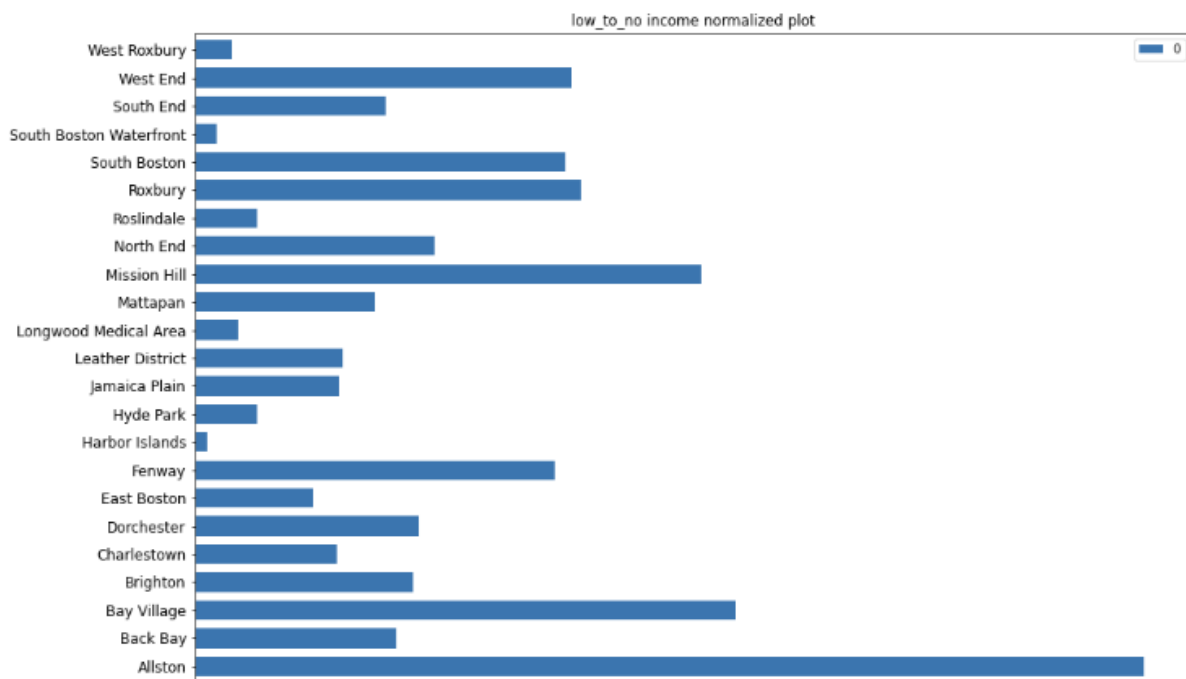
3 Extension Analysis:

Our Extension proposal is determining the influence of various social factors on the number/types of violations that landlords commit. Some factors that we might consider are: the number of children/elderly people, the number of individuals who don't speak English as their first language, the number of minorities who live in a particular neighborhood, etc.. Since housing is a part of society, landlords' violations must be influenced by the social environment of the neighborhood.

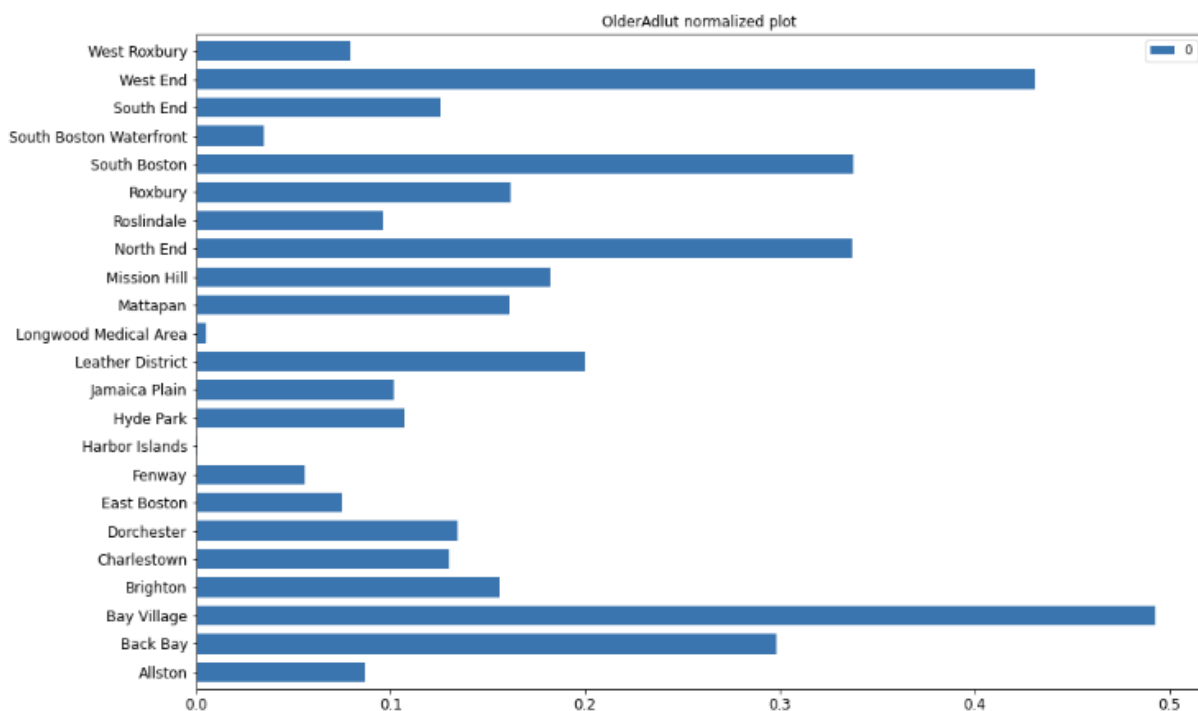
Some questions for analysis might include: What social factors influence the number and type of violations most and what are the social features of different neighborhoods?

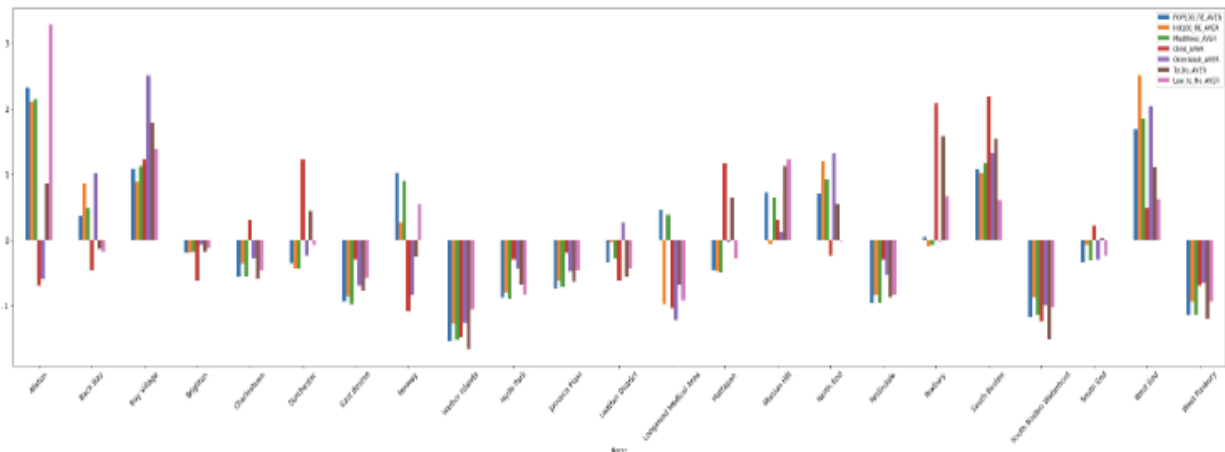
By analyzing the Climate_Ready_Boston_Social_Vulnerability dataset, we find the social environment of different neighborhoods.

For example, Allston has the highest density of Low to no Income people, A lack of financial resources impacts a household's ability to prepare for a disaster event and to support friends and neighborhoods. For example, residents without televisions, computers, or data-driven mobile phones may face challenges getting news about hazards or recovery resources. Renters may have trouble finding and paying deposits for replacement housing if their residence is impacted by flooding. Homeowners may be less able to afford insurance that will cover flood damage. Having low or no income can create difficulty evacuating in a disaster event because of a higher reliance on public transportation.



Also, we found that Bay Village has the highest density of People with Disabilities and Older Adults(those over age 65). And Dorchester, the neighborhood which has the highest number of violations has a distinctly high level of children. Those people are all physically more vulnerable to the impacts and injuries. Among those, the children and the disabilities affect the violations most. We guess that it's because of their vulnerabilities and unique needs. Landlords who violate the rights of tenants with disabilities may be doing so unintentionally, but their actions can have significant consequences like Failure to make reasonable accommodations and maintain the unit .





Among all the features we analyzed, we picked 4 features that influence the number of violations most:

1. The number of residents; 2. The number of low-to-no income people; 3. The number of children; 4. The number of disabilities.

4 Overarching Questions Answered

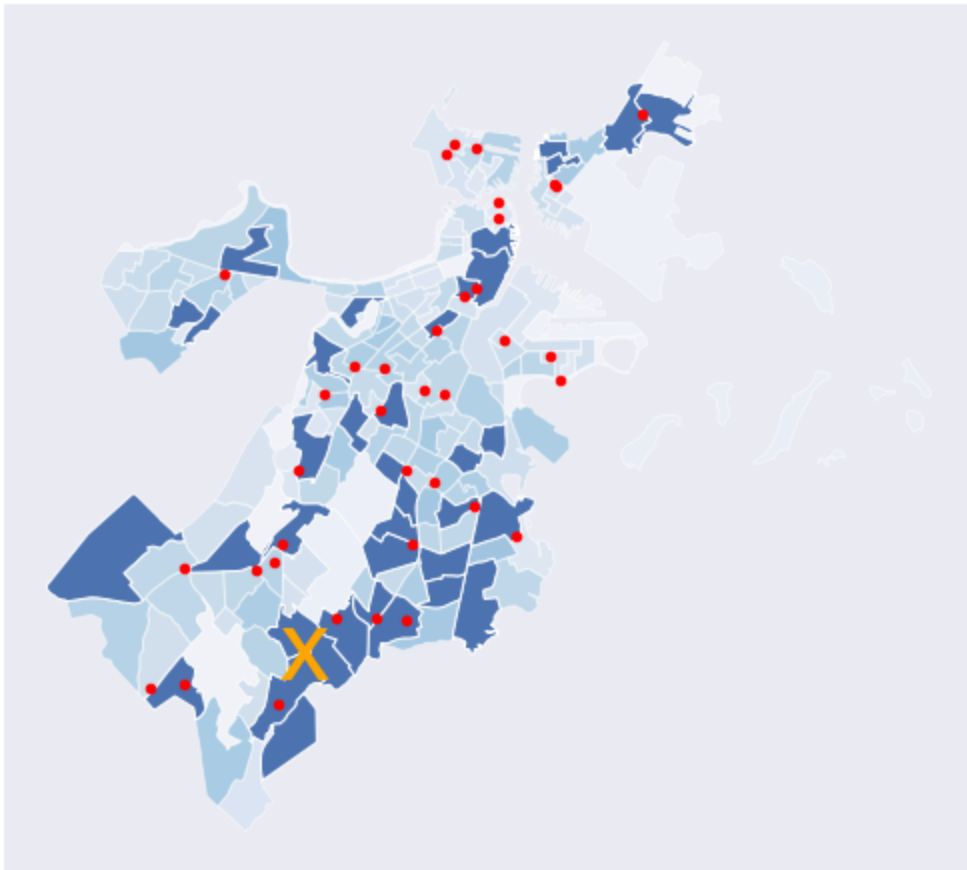
The violation per count per neighborhood tells us that the areas of hyde park, mattapan and dorchester have the most number of violations throughout the boston area

In the extension proposal, the areas of roxbury and dorchester show the highest incidents per neighborhood using the Social Vulnerability dataset

We can also add the community and public graph to show Boston's most disadvantaged neighborhoods with a lack of primary school in their vicinity

we are also able to use kmeans clustering to locate the areas in Boston in most need of additional infrastructure.

Boston Areas with Disadvantaged Populations



By analyzing the plot, we suggest placing the community center on the orange X, which is in zip code 02126.

Work Contributed(will incorporate this more fluidly for the deliverable):

Risheet: Normalized violation counts by neighborhood, income restricted housing analysis, rentsmart dataset analysis and visualization creation, landlord violation analysis and graphs

Chen: extension project analysis and graph creation, affordable rental units analysis, AMI analysis, eviction analysis.

Rohan: extension project analysis and map creation, neighborhood violation analysis and graph creation

Chengyu: preliminary eviction analysis, AMI analysis, service request analysis