City of Boston: Building Violations: Mid-Semester Presentation

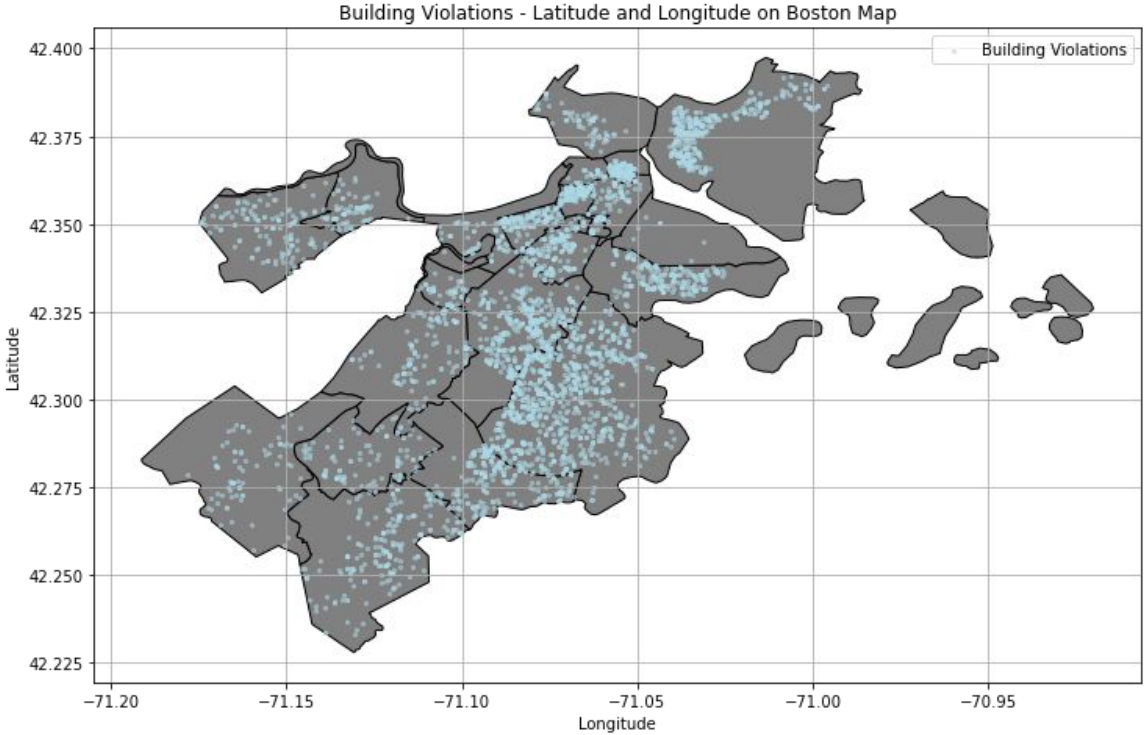
John, Paul, Farzaan, Chloe, & Michael
Building Violations - Team B

Agenda:

- Review achievements covered in previous meeting
- Progress Updates
- Discussion and Questions for Client
- Next Steps

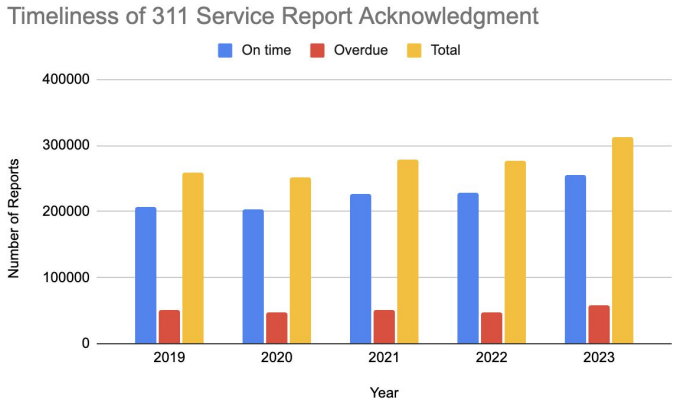
Summary of Early Insights Report

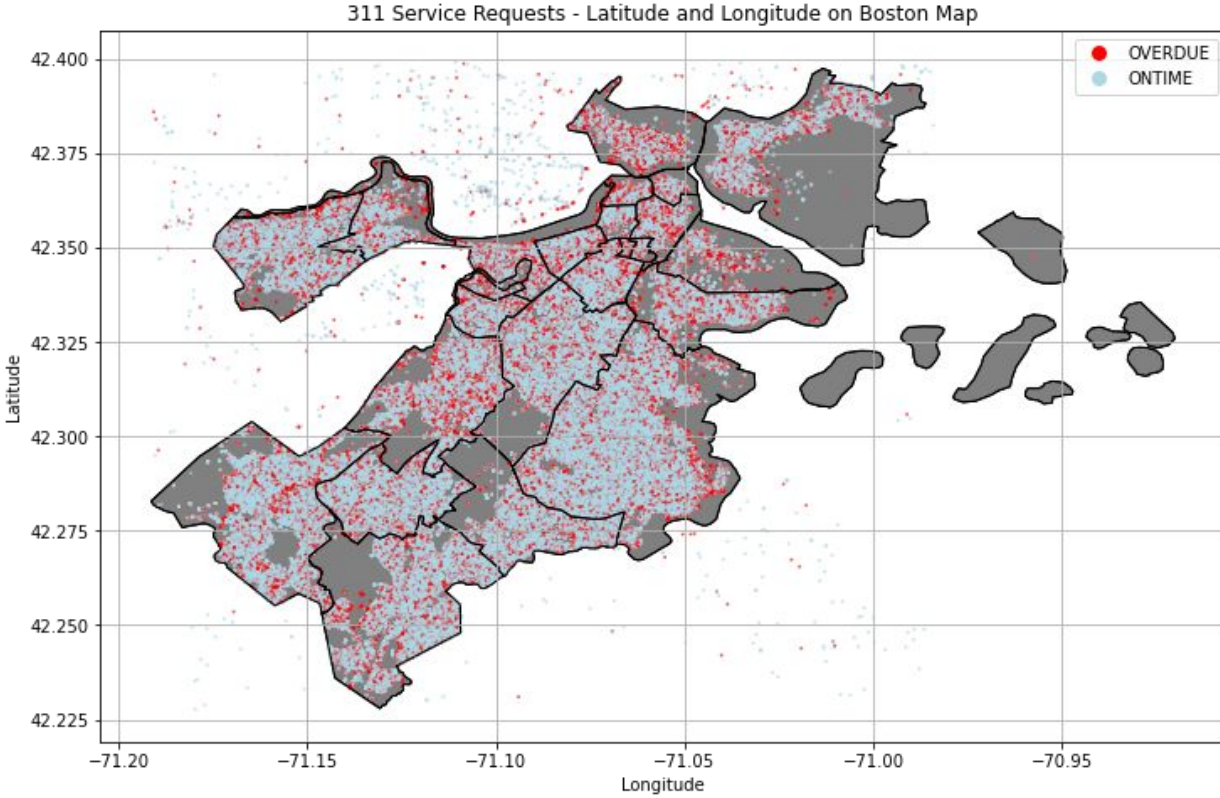
- Answered a key question for the project: What neighborhoods/communities are affected the most?
    - Goal: Make the existing diagram more concise according to latitude and longitude



Summary of Early Insights Report

- Analyzed trends in 311 service reports.

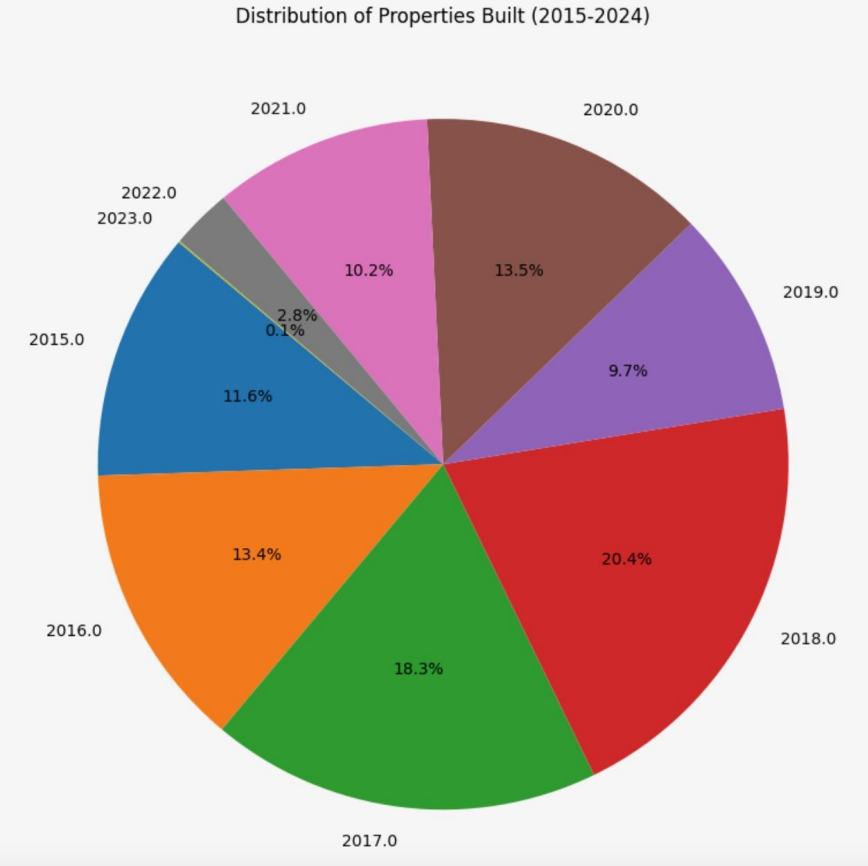




Project Updates

- Answered Two Key Questions for the Project:
  - What kinds of building complaints are people making around the city?
  - Are there common features of certain buildings(same build year, landlords, etc)?
- Developed new algorithms and tools to extract meaningful data from our datasets

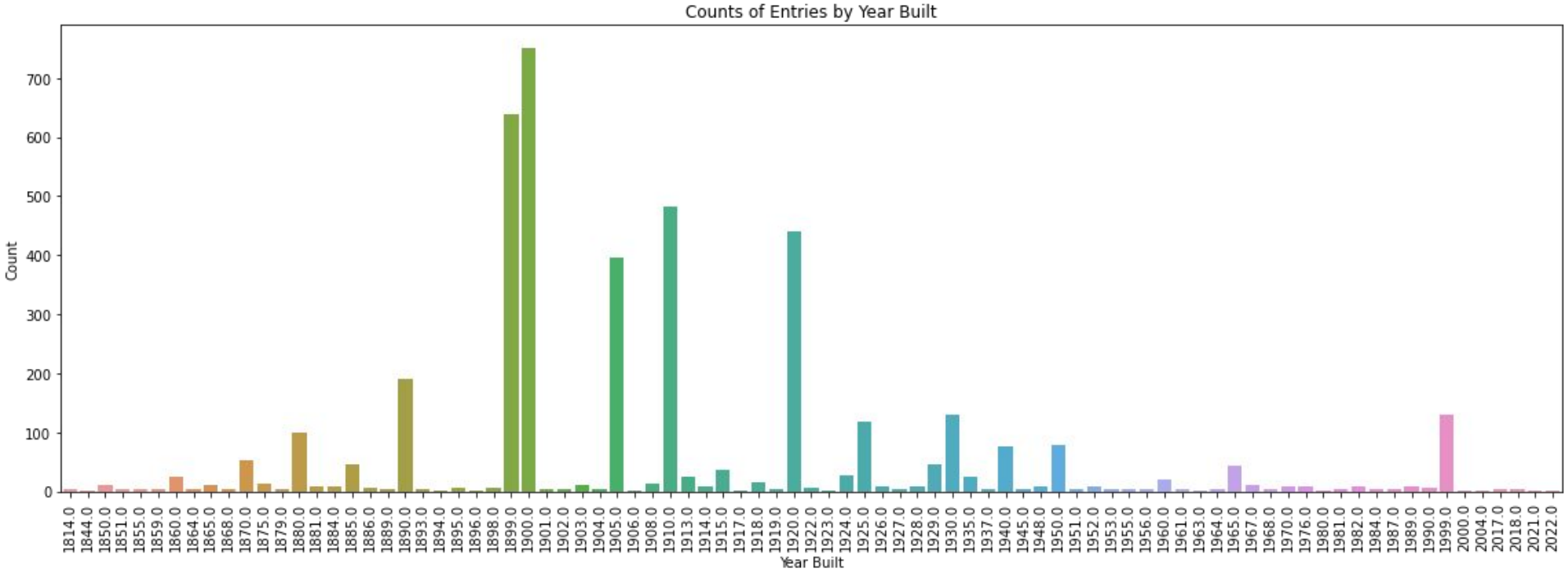
Details of Properties Without Violations



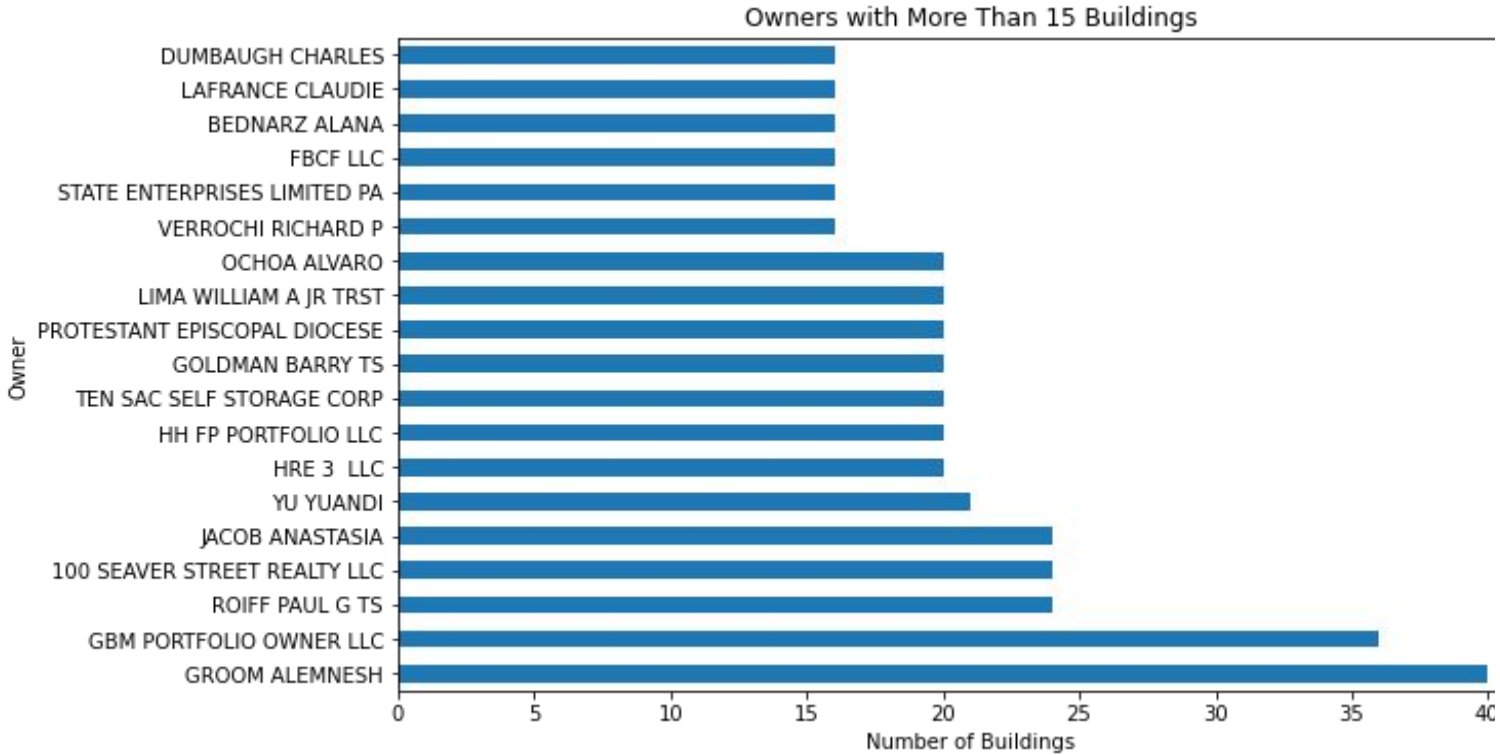
Combining the Dataset

- In order to delve further into common features within the data, we needed to combine a few of the datasets
- What we did is combine the property and building violations dataset with the SAM Addresses one on the sam_id variable, and then combine that dataset with the property assessment one
- This allowed us to extract more data for each building the violations were associated with

Property Details

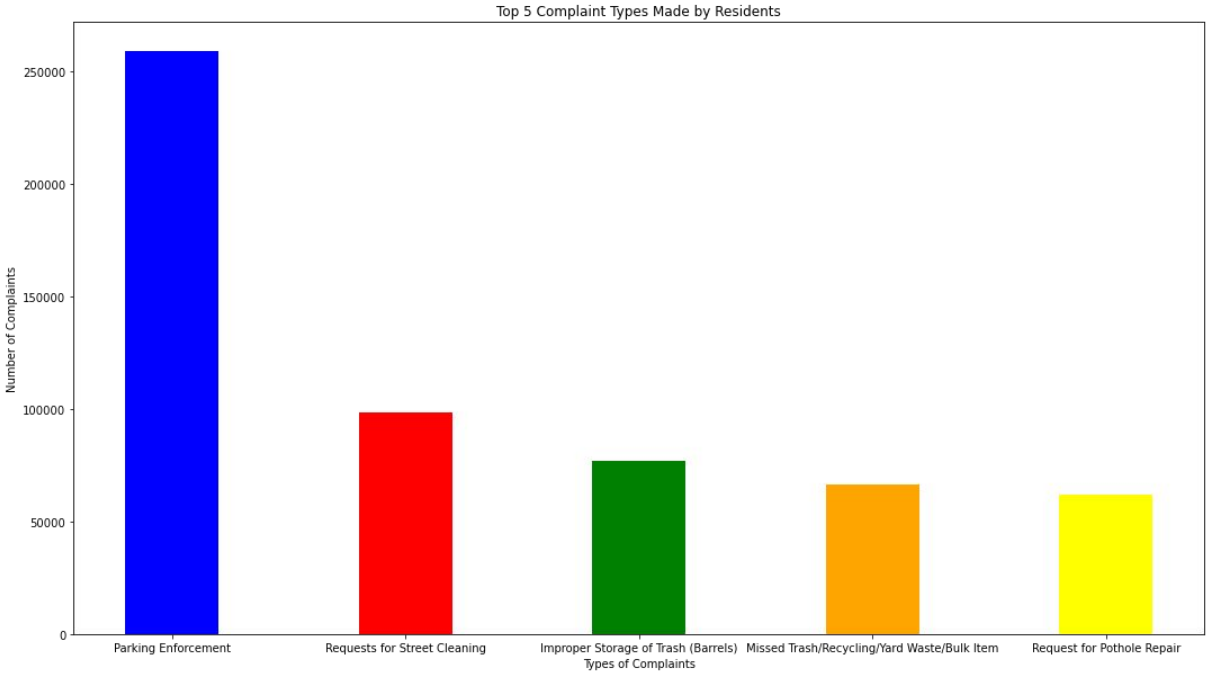


Property Details



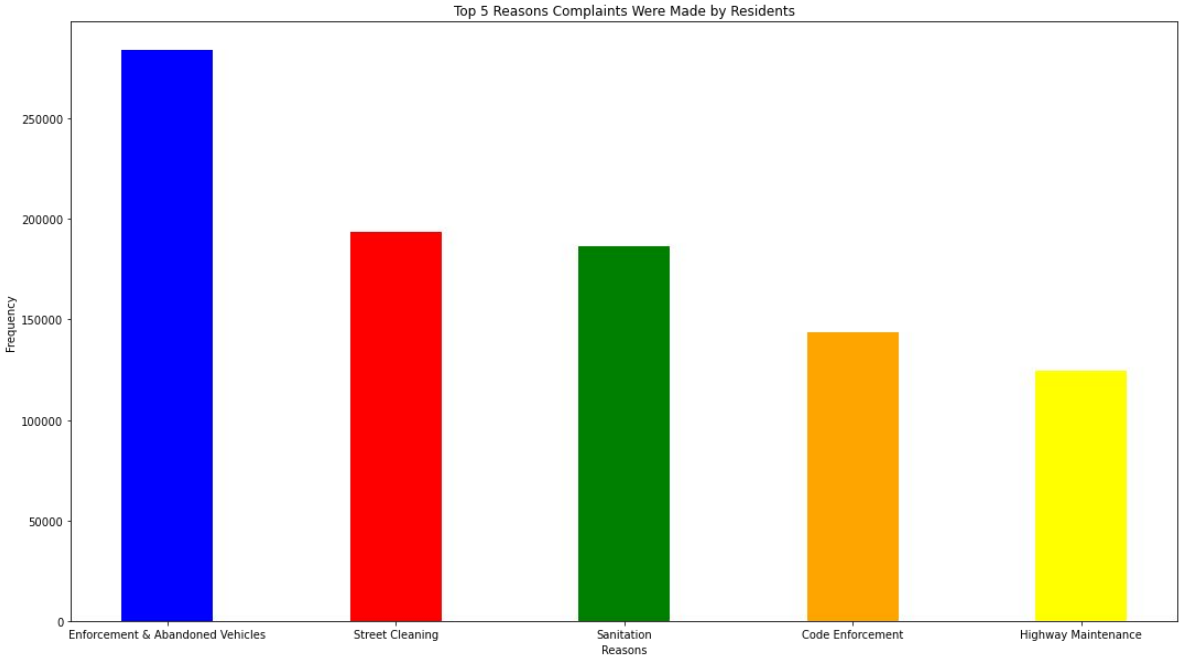
Building Complaints

- Chart that demonstrates the most common types of complaints made by residents
  - Most common type is Parking Enforcement



Building Complaints

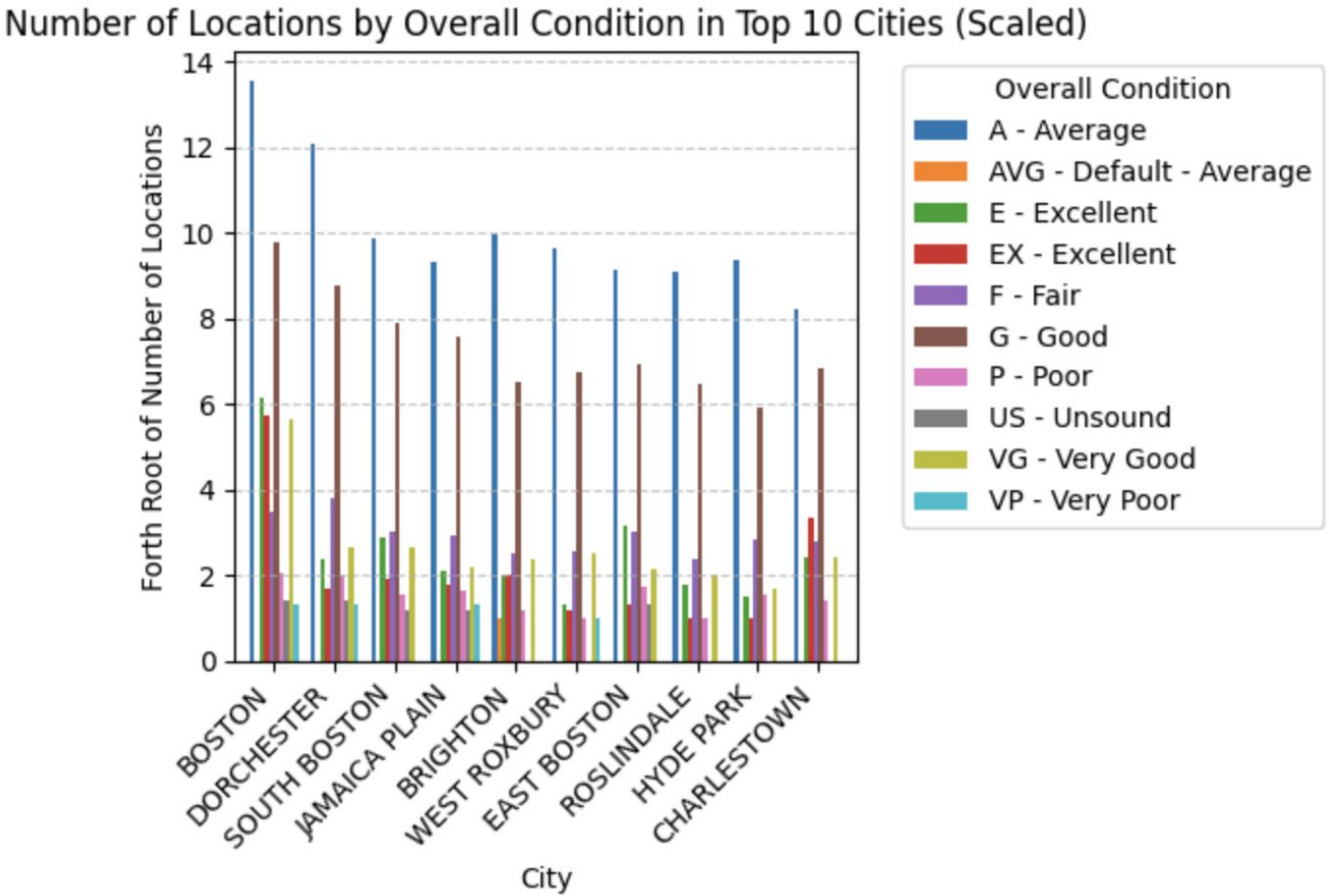
- Chart that shows the top 5 reasons why residents were making complaints
  - Most common is Enforcement & Abandoned vehicles
- Lines up with previous chart



City vs. Overall Condition

To begin, we can examine the overall condition of the various locations we are studying.

- Boston has the highest number of properties of “Excellent” condition, while Dorchester has the highest number of properties of “Poor” condition.



Extension Project Proposal

What we have already accomplished:

- Created a geographical map that visualizes Boston's clusters of communities and neighborhoods with the most Building Violations

Proposal:

- Continue researching the clusters with the top 5 neighborhoods with the most Building Violations
  - Demographics: race, age, gender, socioeconomic class, etc.
  - Average income
- After observing which communities have the most Building Violations, we want to explore:
  - Are certain communities being disproportionately marginalized based on common demographics within their neighborhoods?

Conclusion & Questions From Client

- Extracted data about property details, why residents were submitting violations, and what those violations were
  - From the merged dataset, we were able to examine the how the qualities of a property are a subset to the top building violations
  - Top Building Violation: Parking Enforcement
  - Reason: Enforcement & Abandoned Vehicles
- Examined how certain clusters of neighborhoods in Boston have comparable conditions (Excellent: Boston vs. Poor: Dorchester)
  - Extension Project aims to dive deeper into the discrepancies between the two neighborhoods, and uncover the demographics of each one to see if there are any underlying reasons as to why some neighborhoods are stricter on upkeep than others