



CS 506 - City of Boston: Remodeling and Unit Loss pt.1

CITY of **BOSTON**

Rishab Sudhir '25, Maha Alali '25, Ashley Harlow '24, Wilbert Limson '24,
Anderson Lawrence '24

PROJECT SUMMARY

The City of Boston is interested in looking at how remodeling impacts rental units around the City, specifically how the movement of higher-income individuals into the city might be reducing the number of housing units available because buyers are converting homes with multiple units into larger units, reducing the overall number of units available.

Clients and Mentors

Client: Hope Ruse

PM: Tara Sarli

Spark Advisor: Tom Hopper

Senior Staff: Ziba Cranmer

Tech Stack

Python - Panda, matplotlib, sklearn, seaborn, numpy, scipy

Base Project Questions

Base Questions:

- What communities are building more housing units?
- Which ones are losing housing units?
- Where are housing remodels and renovations happening?
- How many housing units are lost to remodels on average, each year?

How we tackled them:

- Our team decided to split projects into segments where each of us tackled a specific part of the project
 - **Rishab** - Looked at loss/gain of bedrooms/living area after a property was renovated
 - **Ashley** - Percentage of remodels that resulted in residential property loss/gain
 - **Maha** - mapping loss/gains of res-units and bedrooms.
 - **Wilbert** - Looked at reasons for renovations
 - **Anders** - Looking at the appreciation of housing post renovations

Extension Project Questions

Extension Questions:

- What is the correlation between bedrooms and living area?
- If we're not losing bedrooms due to renovations, then what is causing it?
- What are the demographics in areas of loss and gain?

Key Takeaways/Results

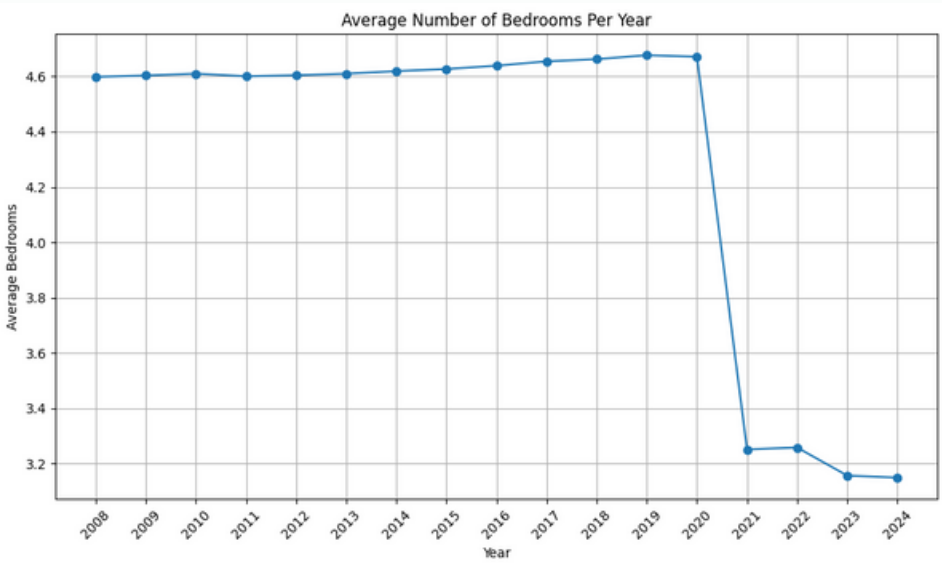
- Boston, Roxbury, and Allston - highest average net annual property gain.
- Hyde Park, Chestnut Hill - the lowest average net annual property gain.
- South and East Boston - gradually losing residential properties.
- Renovated properties tend to gain living space and bedrooms. Brighton lost the most residential units, while Dorchester gained the most.
- renovations emphasize maintaining residential properties, focusing on safety features like smoke detectors and energy-efficient upgrades.



CS 506 - City of Boston: Remodeling and Unit Loss pt.2

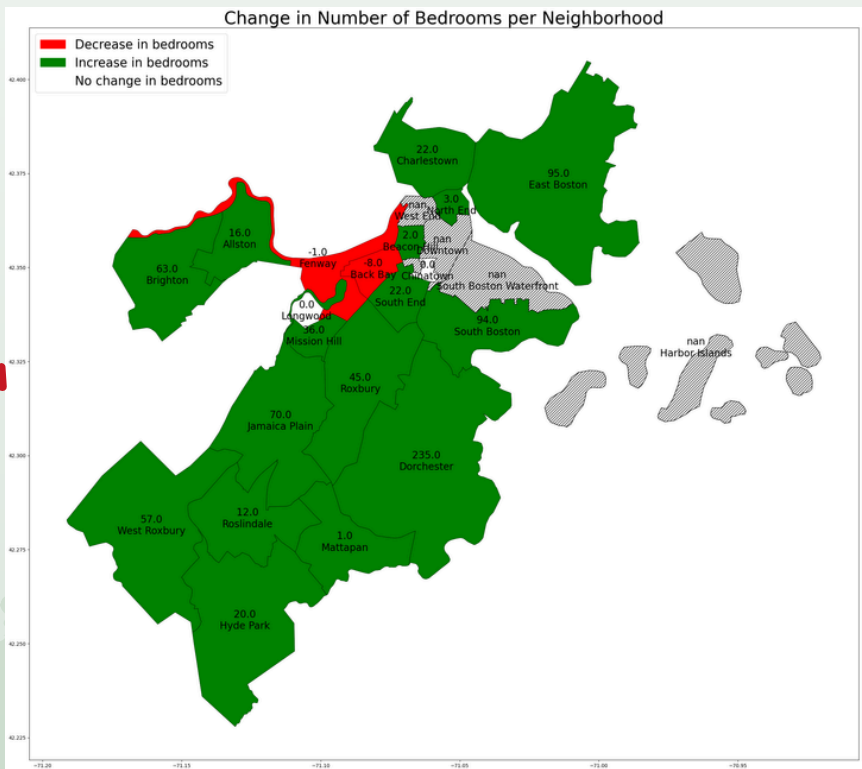
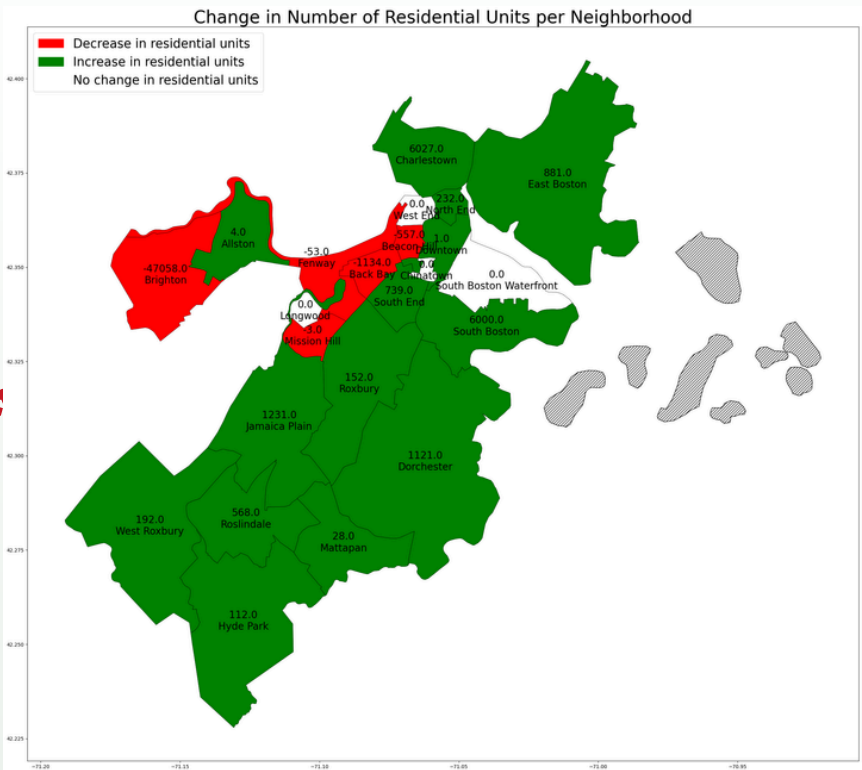
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Insights on Bedrooms

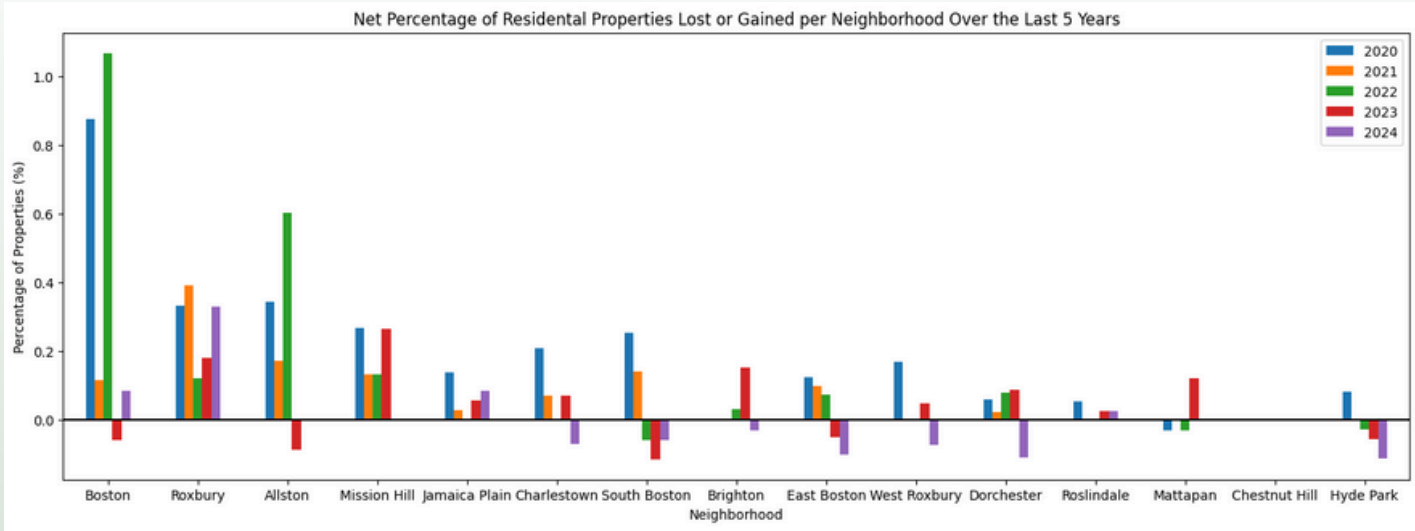


- Sharp decrease in bedrooms per property from 2021 onwards
- Brighton saw the most loss
- Dorchester saw the most gain

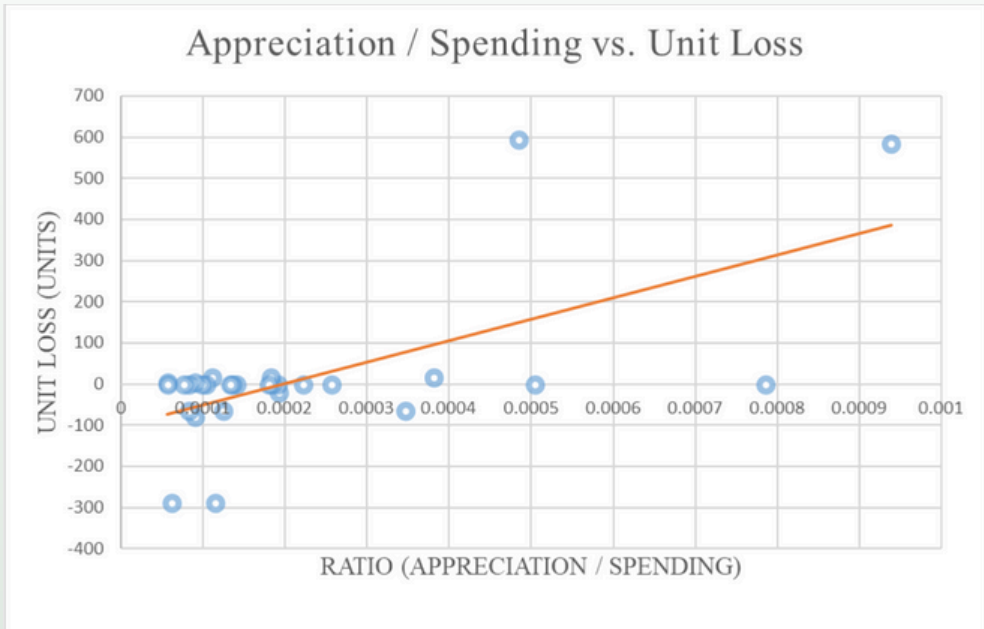
Loss/Gain per Neighborhood



Residential Property Loss/Gain per Neighborhood



Appreciation/Spending ratio to unit loss in buildings



Full Report Here!

