



Third Estate Analytics: Data Insights for Historic Property Preservation

Team : PredictIQ

Sri Gayathri Sahithi Morapakala, Sai Venkata Aditya Arepalli, Sri Charan Byreddy

Executive Summary

This white paper explores the challenges of housing court cases and code violations in Buffalo's historic properties. Using data-driven analysis, we identified ownership patterns and neighborhood impacts to promote safe housing and preserve the city's historic fabric. Scalable tools and interactive visualizations provide actionable insights for the client. The findings call for collaboration and investment to ensure sustainable preservation and housing safety.

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Introduction

Buffalo, NY, is renowned for its historic neighborhoods to create a distinctive identity. However, these historic properties face huge challenges, including ownership complexities, deferred maintenance, and housing code violations. These issues are particularly pronounced in neighborhoods experiencing the pressures of urban growth, shifting demographics, and a significant demand for rental housing.

The preservation of historic properties is not just about safeguarding the past; it is about ensuring the activity of neighborhoods and their ability to adapt to their needs. Balancing the integrity of these historic properties with the necessity for safe, healthy housing is a pressing issue that requires a good understanding of the underlying dynamics.

This project aims to address these challenges by analyzing housing court cases and ownership patterns of historic properties in Buffalo. By identifying trends in code violations, ownership structures, and their broader impacts on communities, the study will provide actionable insights to guide decision-making. The ultimate goal is to aim for the support of the dual objectives of ensuring safe, healthy housing, while preserving the existing historic fabric of our community

Through this effort, we hope to empower stakeholders—city officials, preservation advocates, and community members alike—with data-driven recommendations that promote sustainable urban development while honoring the city's rich heritage.

Background

Buffalo, NY, has long been celebrated for its historic neighborhoods, home to architectural gems from the 19th and early 20th centuries. These structures reflect a rich history of urban development, shaped by the city's industrial prosperity and cultural diversity. However, as economic conditions shifted over the decades, many of these properties experienced neglect, abandonment, or inappropriate modifications, leading to a gradual decline in their condition and historic value.

The issue has been compounded by changing ownership patterns, particularly in areas with high demand for rental properties, such as neighborhoods **near colleges and universities**. The growth of student housing has introduced absentee landlords and short-term investment strategies, often prioritizing profit over maintenance. This has led to an increase in housing code violations, tenant safety concerns, and legal disputes, particularly in historic neighborhoods where maintenance and preservation standards have decreased.

Housing court cases involving historic properties have become a focal point for addressing these issues. They reveal not only the challenges of enforcing housing codes but also the broader implications for community stability and property values. Data from recent years highlights a significant rise in violations tied to deferred maintenance, overcrowding, and unsafe living conditions, often disproportionately affecting historic properties.

The relevance of this issue has grown in today's world as cities like Buffalo grapple with urban revitalization and historic preservation. Historic properties are not just architectural assets but also economic and cultural drivers that contribute to tourism, neighborhood identity, and community pride. Preserving these structures while addressing contemporary housing needs is a critical challenge.

Efforts to ensure safe, healthy housing for all residents have taken center stage in urban planning discussions. At the same time, preserving the historic fabric of communities has become a priority for cities seeking sustainable growth, environmental conservation, and cultural resilience.

This project addresses these challenges by analyzing trends in ownership, violations, and neighborhood impacts, providing a data-driven foundation for crafting solutions that balance historic preservation with the need for safe and equitable housing.

Problem Statement

Buffalo, NY, faces challenges in addressing housing court cases and ownership patterns of **historic properties**, which impact both resident safety and the preservation of the **city's historic fabric**. Trends in ownership and recurring code violations have led to neighborhood instability, deferred maintenance, and risks to tenant well-being. These issues threaten the dual objectives of ensuring safe, healthy housing while protecting the architectural and cultural heritage that defines the community.

- [Evidence of Property Issues](#)
- [blighted-buildings-buffalo-news](#)
- [buffalo-cobblestone-buildings-faced-code-violations-for-years](#)
- [east-side-landlord-faces-big-fines/](#)

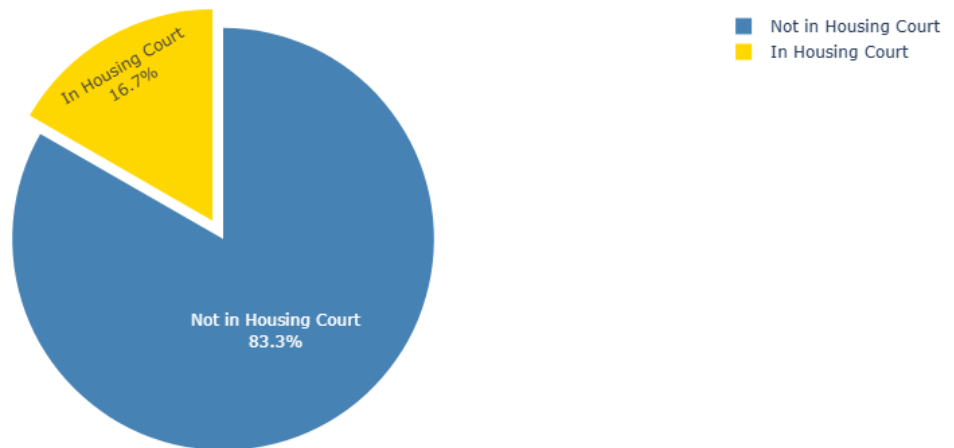
Solution

To address the challenges of housing court cases, code violations, and ownership complexities in historic properties in Buffalo, NY, this project proposes a comprehensive data-driven approach to uncover actionable insights and drive targeted solutions. By analyzing trends in ownership, violations, and neighborhood impacts, the proposed solution aims to inform better policies, enhance enforcement strategies, and promote sustainable historic preservation.

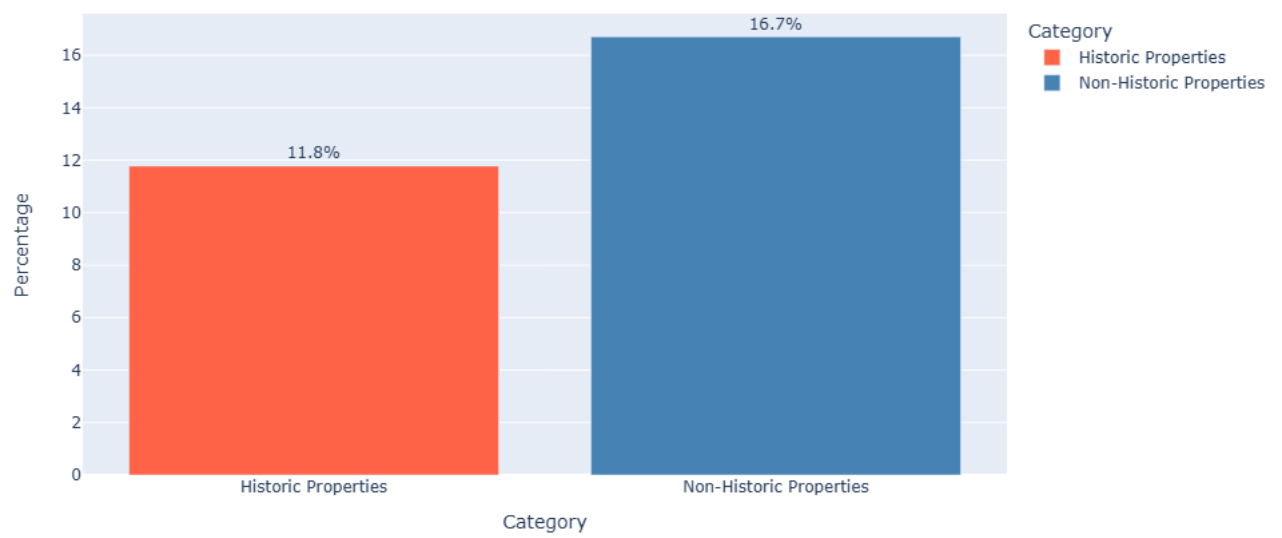
Data Analysis and Visualization

- **Integration of Data Sources:** Combining datasets from city housing court cases, code violations, and 311 requests violations to provide a clear view of historic property challenges.
- **Trend Identification:** Data intuition analysis tools(python libraries) will identify patterns, such as historic vs non historic, number of vacant violations, and housing court cases.
- **Geospatial Mapping:** Interactive maps will pinpoint areas with the highest concentration of violations and cases, highlighting neighborhoods at risk.

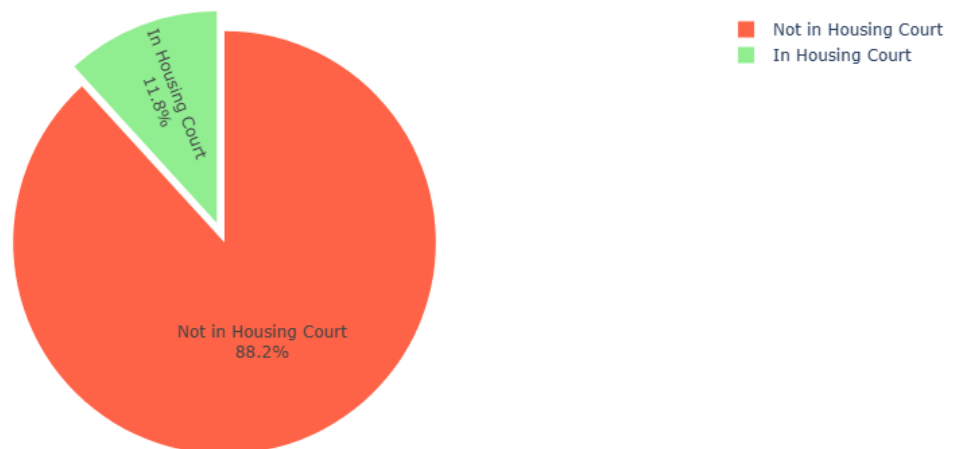
Non-Historic Properties in Housing Court



Percentage of Properties in Housing Court Cases



Historic Properties in Housing Court

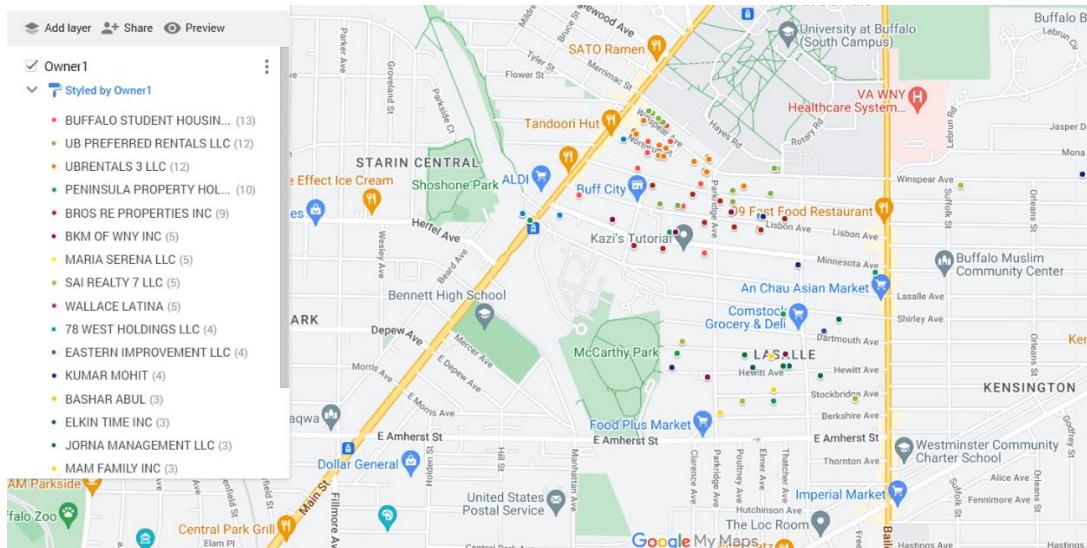
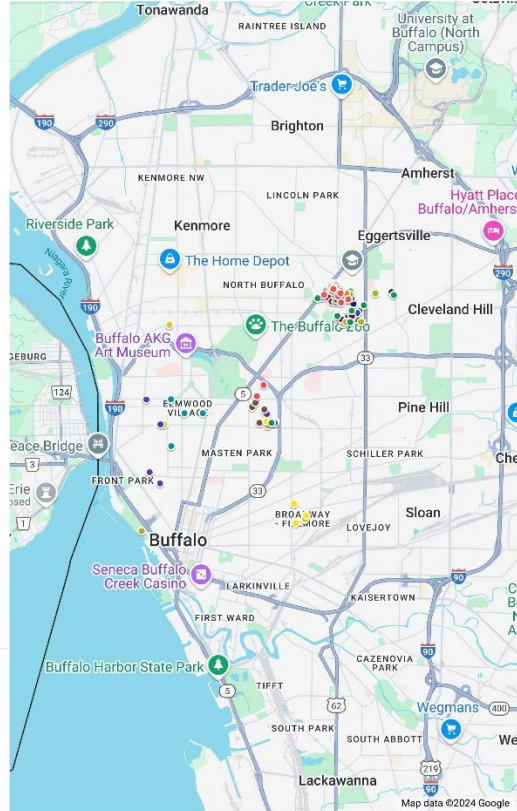


Analysis

Owners

Owner1

- BUFFALO STUDENT HOUSING LLC
- UBRENTALS 3 LLC
- UB PREFERRED RENTALS LLC
- PENINSULA PROPERTY HOLDINGS
 - BROS RE PROPERTIES INC
 - SAI REALTY 7 LLC
 - WALLACE LATINA
 - BKM OF WNY INC
 - MARIA SERENA LLC
 - KUMAR MOHIT
 - 78 WEST HOLDINGS LLC
- EASTERN IMPROVEMENT LLC
 - NUBAD ENTERPRISE LLC
 - RAMAZ LLC
 - BASHAR ABUL
 - ELKIN TIME INC
 - MIRANDA MICHAEL V JR.
 - MAM FAMILY INC
 - JORNA MANAGEMENT LLC



Policy Suggestion for UB's Off-Campus Housing Reform

1. On-Campus Housing Requirement

- **Policy:**
UB requires all students to live on campus unless granted a valid waiver.
- **Waiver Eligibility:**
Waivers may be issued for:
 - Students living with family members.
 - Students residing in properties they own.

2. Overflow Housing Secured by UB

- **Policy:**
For students who receive waivers, UB would facilitate overflow housing contracts directly with landlords.
- **Key Benefits:**
 - Properties must meet safety and code compliance standards.
 - Rent agreements are transparent, with students paying rent through UB's semester-based room and board charges.

3. Landlord Accountability

- **Policy:**
UB contracts would mandate that landlords meet inspection standards like HUD's Housing Choice Voucher system.
- **Key Benefits:**
 - Ensures all off-campus student housing is well-maintained and free from code violations.
 - Creates a standardized system of compliance for rental properties.

4. Expected Outcomes

- Improved safety and quality of housing for students.
- Reduced rent prices through UB's negotiation power as a bulk renter.
- Preservation of historic neighborhoods by reducing the impact of poorly maintained rental properties.

Implementation

Initial Steps

1. **Data Collection:**
Collected data from reliable government sources to ensure accuracy and relevance.
2. **Research on Data Columns:**
Investigated the columns in the datasets to understand their structure and significance.
3. **Expert Consultation:**
Engaged preservation experts and subject matter professionals to gain insights for effective analysis and align with preservation goals.
4. **Preliminary Data Manipulation:**
Identified useful joins in the datasets and proposed manipulations, such as consolidating the number of violations per property into a single column for better clarity.

Iteration 1

1. **Data Exploration and Cleaning:**
Analyzed and cleaned 10 real-time datasets sourced from reliable government sources.
2. **Integration and Analysis:**
Merged datasets to identify ownership patterns, code violations, and legal issues tied to historic properties.
3. **Database Creation:**
Generated a master list of historic properties as a comprehensive resource for further analysis.

Iteration 2

1. **Data Cleaning:**
Addressed inconsistencies, duplicates, and missing values to create a refined master dataset.
2. **Data Scraping:**
Introduced data scraping using the **BeautifulSoup4** library to gather additional relevant data, which was missing in the initial datasets.

3. **Data Pipeline Collaboration:**

Collaborated with the Third Estate team to build a more scalable and efficient data pipeline and data warehousing system, achieving an 80% improvement over the preliminary database.

4. **Visualization:**

Used **Plotly** and **Google Maps** to create interactive and projector-friendly visuals for better stakeholder understanding.

5. **Focused Approach:**

Applied refined filters to remove unnecessary data (akin to dimensionality reduction) and generate meaningful insights such as ownership clusters and violation analysis.

Filters Applied in Iteration 2

- Identified property owners who:
 - Own at least **3 historic buildings**, one of which must be in **housing court case**.
 - Have at least **15 code violations** across all three buildings.
- Excluded vacant land (properties with a class code in the 300s) in historic districts from counting as one of the 3 historic buildings.
- Focused on properties with:
 - Market value **under \$500,000**.
 - Last sale price **greater than \$1** but **under \$400,000**.
- Displayed bank codes where available.

Conclusion

This whitepaper has outlined the challenges and proposed solutions for addressing housing court cases, code violations and ownership patterns of historic properties in Buffalo, NY. By leveraging **data-driven insights**, we aim to achieve the dual objectives of ensuring safe, healthy housing while preserving the city's historic fabric.

Through an iterative approach, we have:

- Collected and analyzed comprehensive datasets to identify patterns in ownership and code violations.
- Built a scalable data pipeline and created actionable insights to support targeted interventions.
- Developed visualizations that empower client with clear, interactive tools to guide policy and decision-making.

Ensuring the safety and integrity of historic properties is not only critical for the residents' well-being but also essential for safeguarding Buffalo's cultural and architectural legacy.