
# NY Restaurant Inspection and Violation

Use Tableau to create a dashboard that enhances awareness of food safety among government officials and residents in New York counties.

Xinyue Hu

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## Introduction

- What kind of product do I aim to launch?
- Why did I choose Tableau for this project?
- How did I select and prepare the data for analysis?
- What challenges did I encounter during the process?

02

## Process

- How did I make this dashboard?
- What functions in this dashboard can help me achieve my proposed goals?

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## Next Step

- Add NYC content
- Incorporate Python to predict future inspection results

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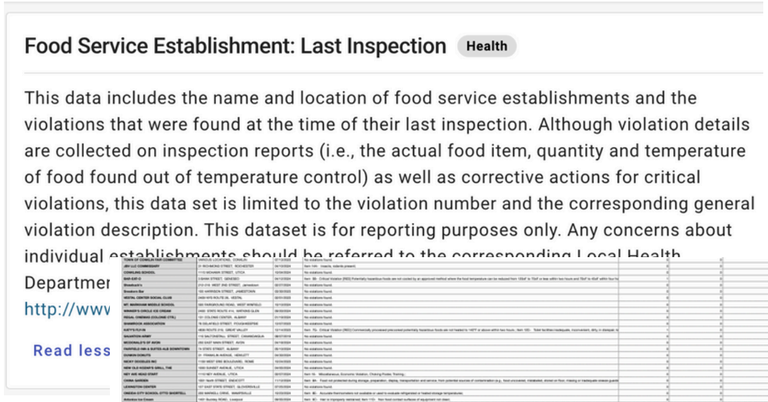
# Introduction

- Problem, proposed goals, and solution
- Data selection
- Challenges

# Problem



Food Service Establishment: Last Inspection **Health**

This data includes the name and location of food service establishments and the violations that were found at the time of their last inspection. Although violation details are collected on inspection reports (i.e., the actual food item, quantity and temperature of food found out of temperature control) as well as corrective actions for critical violations, this data set is limited to the violation number and the corresponding general violation description. This dataset is for reporting purposes only. Any concerns about individual establishments should be referred to the corresponding Local Health Departmer

http://www

Read less

## Low accessibility and convenience

Government websites often present this data in **lengthy tables or static reports**, making it difficult for residents and business owners to extract meaningful insights.

There are also **no filtering** options to focus on specific areas, types of violations, or the portion of violations.

# Proposed Goals

**Increasing the awareness and accessibility of Inspection Results**

The government can identify regions with the **highest** number of violations and analyze the **frequency** of specific types of violations.

Residents can **easily access** inspection information for restaurants in their living area and conveniently **submit complaints** to the government.

# Solution: Dashboard


**Data Visualization**

I created an interactive dashboard by Tableau. The dataset comes from the official inspection results of restaurants across all counties in New York State. This dashboard allows users to **easily access specific county data**, **identify the most frequent violations**, or **search for detailed information about specific restaurants** and their associated corporations.

Interactive charts and maps enable users to click on specific regions or categories to drill down into detailed data, such as the frequency of certain violations in a selected county. Users can customize their view by toggling between different metrics (e.g., total violations, critical violations, or non-critical violations) to gain deeper insights.

# Challenges

## Data Selection

At first, I planned to use official data from Los Angeles officials for the project. However, while preparing the data, I found it was missing key information needed for map visualization, like postal codes and geographic longitudes. Also, the dataset didn't provide detailed descriptions of violations, which meant that the final outcome would only be able to display food safety scores.

inspections

| | | | | | |
|---|---|---|---|---|---|
| **HANCOCK REGENCY CONDO** | **2022-11-29** | | **326 S WESTMINSTER AVE** | **LOS ANGELES** | **PR0031430** |
| **ARIEL COURT APTS SPA POOL** | 2020-01-31 | | 535 GAYLEY AVE | LOS ANGELES | PR0051541 |
| **B AND B CORPORATION** | 2024-06-06 | 99 | 7782 SAN FERNANDO RD | SUN VALLEY | PR0138220 |
| **LOWE'S #1852** | 2023-09-06 | 100 | 13500 PAXTON ST | PACOIMA | PR0130707 |
| **AFC SUSHI @ RALPH'S # 55** | 2024-04-30 | 100 | 521 W FOOTHILL BLVD | LA CANADA FLINTRIDGE | PR0160430 |
| **THE LOOP** | 2024-08-27 | 98 | 1100 W COVINA BLVD | SAN DIMAS | PR0137234 |
| **WILSHIRE BORGATA SPA POOL** | 2023-05-31 | | 12222 WILSHIRE BLVD | LOS ANGELES | PR0054471 |
| **LA VERNE CAR WASH** | 2024-07-20 | 97 | 914 W FOOTHILL BLVD | LA VERNE | PR0034937 |
| **NEWCASTLE GARDENS SPA POOL** | 2020-06-15 | | 5461 NEWCASTLE AVE | ENCINO | PR0060647 |

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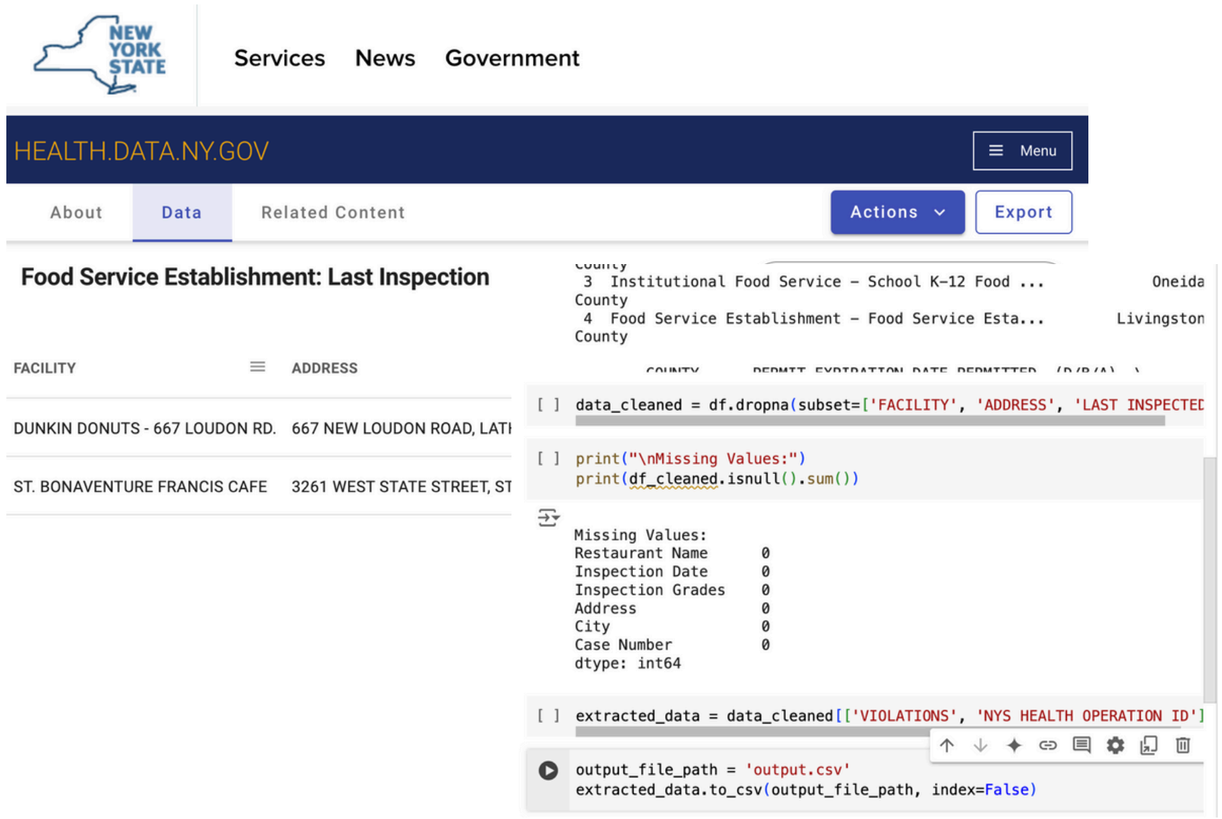
# Process

- Data preparation
- Visualization
- Filters

# Data Preparation




- Conducted data sourcing from official government websites
- Clean the data and deal with the missing value
- Extracted **[Violations]** and **[NYS Health Operation ID]** for further analysis and integration

# Visualization

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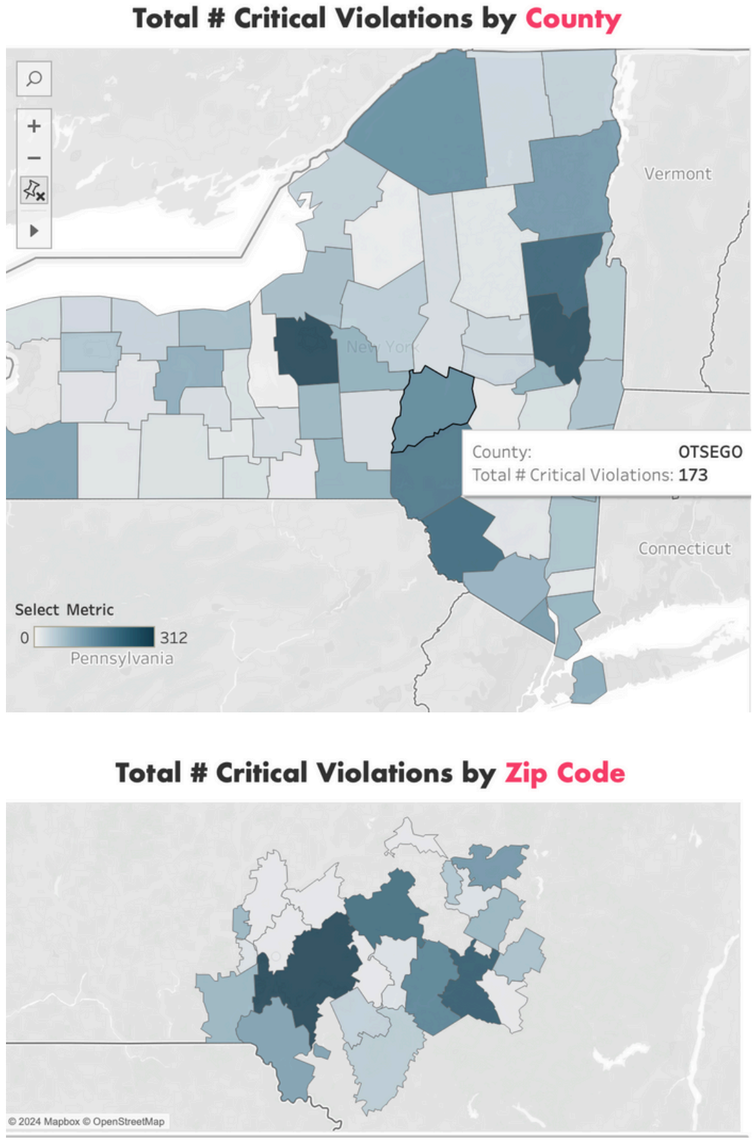
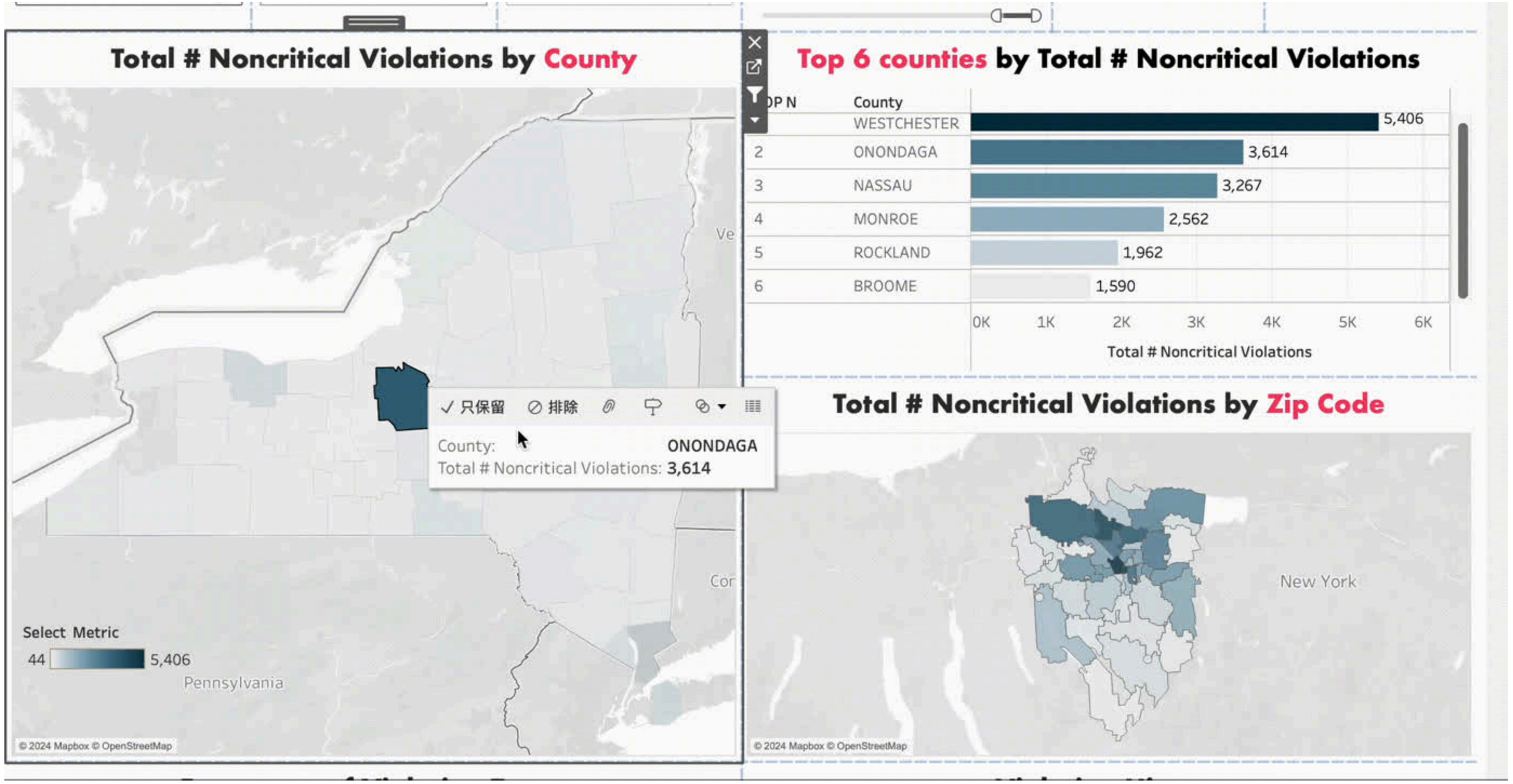
## Map

- Color Coding
- Highlights the conditions in specific areas based on ZIP codes
- Integration of multiple data layers




Total # Noncritical Violations by County
Ve
Cor
✓ 只保留
⊘ 排除
County: ONONDAGA
Total # Noncritical Violations: 3,614
Select Metric
44
5,406
Pennsylvania
© 2024 Mapbox © OpenStreetMap
Top 6 counties by Total # Noncritical Violations
DP N
County
1 WESTCHESTER 5,406
2 ONONDAGA 3,614
3 NASSAU 3,267
4 MONROE 2,562
5 ROCKLAND 1,962
6 BROOME 1,590
0K
1K
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Total # Noncritical Violations
Total # Noncritical Violations by Zip Code
New York
© 2024 Mapbox © OpenStreetMap

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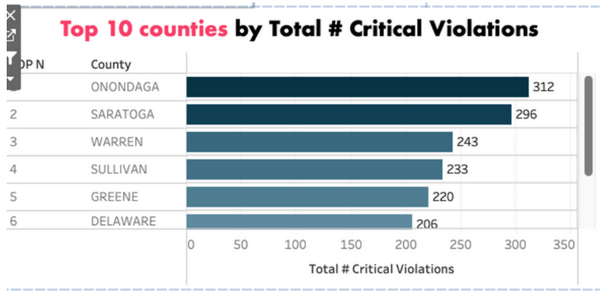
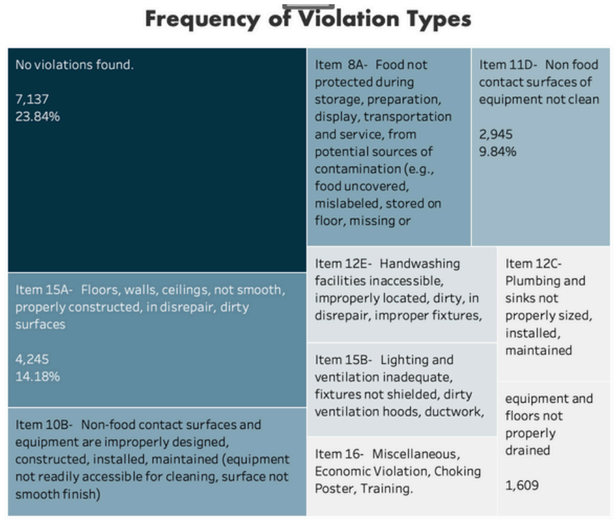
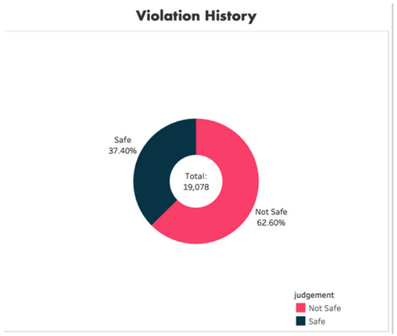
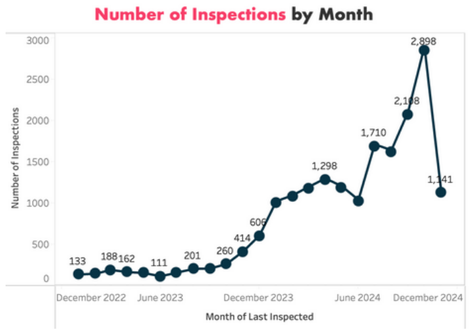
## Charts

- Bar chart / Marimekko chart / Pie Chart / Line Chart...
- Compare metrics across categories

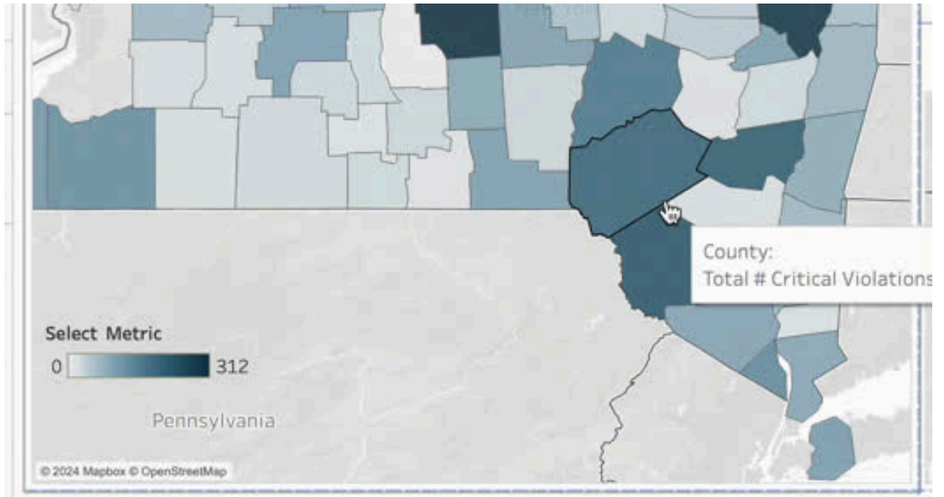


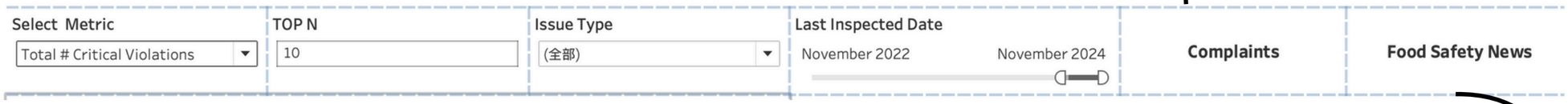



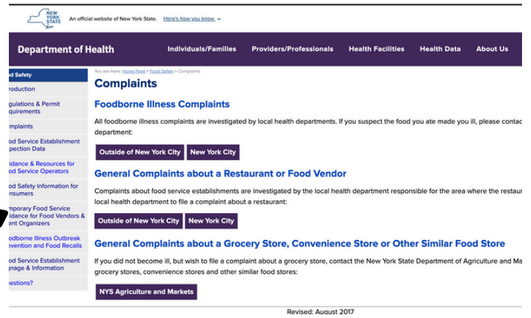

# Visualization



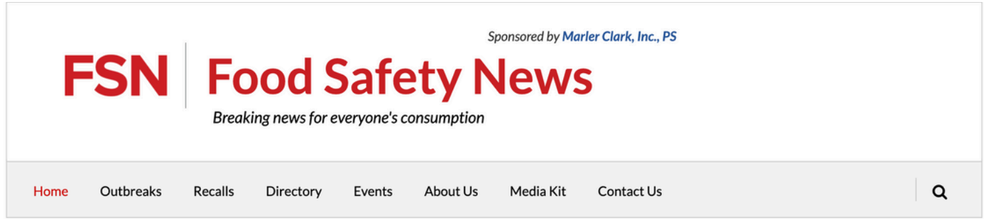

## Frequency of Violation Types

# Filters

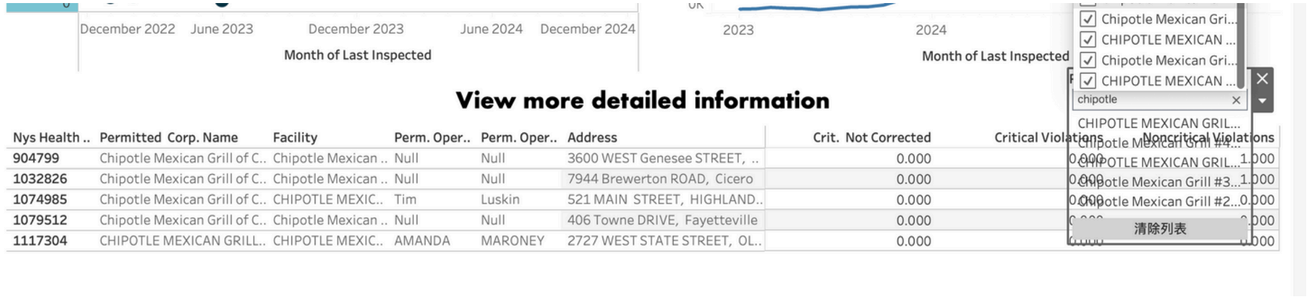


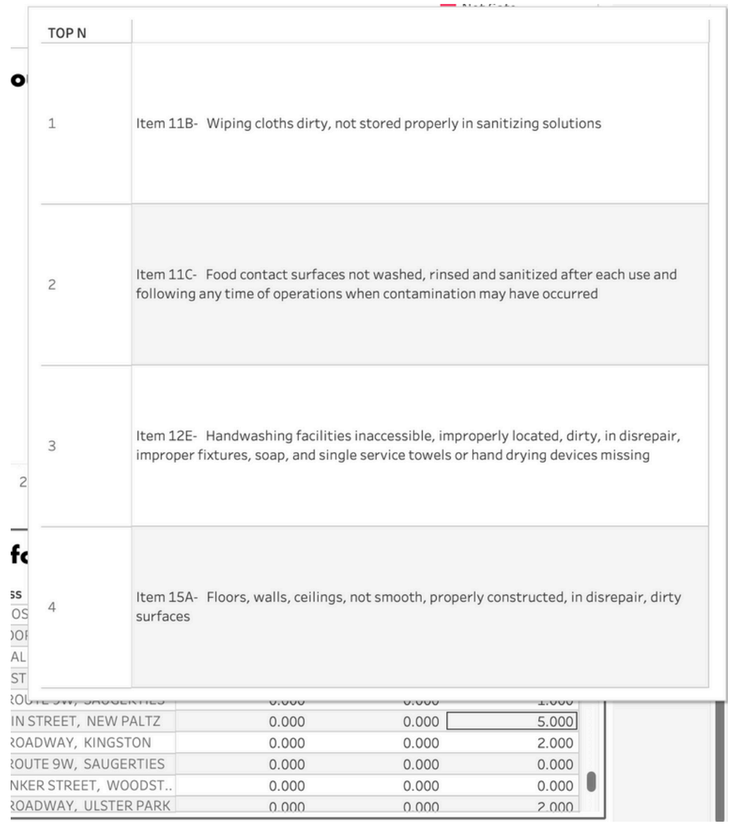




I added several filters to the dashboard to make it more user-friendly. Users can choose metrics like critical or non-critical violations and view rankings. This allows the government to easily identify which counties need the most attention for food safety issues.



# Filters




At the bottom of the dashboard, I added a filter that allows users to search for a specific restaurant by name and view its inspection data. If the restaurant has a violation history, users can hover over the numbers to see the specific details of the violations.

# Next Step

## Add NYC dataset

Since the datasets for New York State and New York City are separate, I will incorporate NYC data later to enhance my dashboard.

## Prediction

I've used Tableau's prediction feature to showcase a possible future trend. But I also plan to use GLM model to further predict future inspection results.

# Thank You