

# Executive Summary

## New York Restaurant Inspection Software Report

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## Abstract

In this project, this team analyzes all the violations that were committed during 2016 from the “New York Restaurant Inspection” dataset. This report presents the analysis tasks to be performed in the Introduction section and the analysis results in the Analysis sections below.

In the Analysis sections, this team found that the majority numbers of violations were committed in Manhattan suburb during 2016, which were 45920 cases while there were only 3807 cases in Staten Island. In addition, the numbers of animal-related violations seem to be high from August to late October in all the suburbs. This might be because the weather in New York starts to get cools during these months, and those animals would search for warmer shelter inside the building. The statistic also shows that the numbers of rat-related violation are higher than mice related violation in each suburb. Lastly, this team learnt that Chinese restaurants have the highest number of food violations in 2016.

## Introduction

The main deliverable of this report is to communicate and visualize the software design ideas that could help the user to gain an accurate and deep understanding of the “New York Restaurant Inspection” dataset seamlessly. It also provides some useful examples of the software’s function in the form of pictures and texts in the sections below.

This report will cover 12 months data analysis ranging from 1<sup>st</sup> January 2016 to 31<sup>st</sup> December 2016. The reason for presenting the results of the year 2016 in this report is because, in 2016, there were many violations that occurred which makes it easy to test each function of the software.

The analysis tasks to be performed and presented in this report includes:

- Retrieve all inspection details by selected period
- Retrieve all violations by keyword input and selected period
- Plot the distribution of violations over the different suburbs by selected period
- Analyze the cases related to animals and their trend over time and distribution over suburbs
- Compare the numbers of violations between two cuisines by selected period

## Analysis 1: Retrieve all inspection details in year 2016

As shown in the figure 1 below, all the inspection details in the year 2016 is printed in a spreadsheet style on the screen. The data analyst can also use the scrollbars to view and inspect the data throughout the whole year.

Note: all the inspection data are too long to put here; therefore, this student shows only the first page of the data.

*Figure1: Retrieve all inspection details in year 2016*

| New York Restaurant Inspection |                 |  |                |  |               |       |      |
|--------------------------------|-----------------|--|----------------|--|---------------|-------|------|
| Dataset                        | INSPECTION DATE | ACTION                                 | VIOLATION CODE | VIOLATION DESCRIPTION                            | Critical Flag | Score | Grad |
|                                | 01/02/2016      | Violations were cited in the follo 15L |                | Smoke free workplace smoking Not Critical        | None          | None  |      |
|                                | 01/02/2016      | Violations were cited in the follo 06E |                | Sanitized equipment or utensil, Critical         | 13.0          | A     |      |
|                                | 01/02/2016      | Violations were cited in the follo 15L |                | Smoke free workplace smoking Not Critical        | None          | None  |      |
|                                | 01/02/2016      | Violations were cited in the follo 10I |                | Single service item reused, impr Not Critical    | 13.0          | A     |      |
|                                | 01/02/2016      | Violations were cited in the follo 04L |                | Evidence of mice or live mice pr Critical        | 13.0          | A     |      |
|                                | 01/02/2016      | Violations were cited in the follo 06F |                | Wiping cloths soiled or not storr Critical       | 13.0          | A     |      |
|                                | 01/02/2016      | Violations were cited in the follo 04N |                | Filth flies or food/refuse/sewage Critical       | 13.0          | A     |      |
|                                | 01/02/2016      | Violations were cited in the follo 10B |                | Plumbing not properly installed Not Critical     | 13.0          | A     |      |
|                                | 01/02/2016      | Violations were cited in the follo 08A |                | Facility not vermin proof, Harbo Not Critical    | 13.0          | A     |      |
| x                              | 01/04/2016      | Violations were cited in the follo 10B |                | Plumbing not properly installed Not Critical     | 12.0          | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 06F |                | Wiping cloths soiled or not storr Critical       | 12.0          | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 04N |                | Filth flies or food/refuse/sewage Critical       | 13.0          | None  |      |
| x                              | 01/04/2016      | Violations were cited in the follo 02G |                | Cold food item held above 41 $^{\circ}$ Critical | 64.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 10F |                | Non-food contact surface imprc Not Critical      | 13.0          | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 04L |                | Evidence of mice or live mice pr Critical        | 33.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 04C |                | Food worker does not use prop, Critical          | 13.0          | A     |      |
|                                | 01/04/2016      | No violations were recorded at 1 22C   |                | Bulb not shielded or shatterproc Not Critical    | None          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 04H |                | Raw, cooked or prepared food i: Critical         | 53.0          | C     |      |
| x                              | 01/04/2016      | Violations were cited in the follo 10J |                | ""Wash hands sign not posted . Not Critical      | 9.0           | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 06E |                | Sanitized equipment or utensil, Critical         | 32.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 06B |                | Tobacco use, eating, or drinking Critical        | 19.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 08A |                | Facility not vermin proof, Harbo Not Critical    | 9.0           | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 10E |                | Accurate thermometer not prov Not Critical       | 20.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 02B |                | Hot food item not held at or abc Critical        | 14.0          | B     |      |
|                                | 01/04/2016      | Violations were cited in the follo 02B |                | Hot food item not held at or abc Critical        | 8.0           | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 04H |                | Raw, cooked or prepared food i: Critical         | 48.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 10B |                | Plumbing not properly installed Not Critical     | 9.0           | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 06C |                | Food not protected from potent Critical          | 40.0          | C     |      |
|                                | 01/04/2016      | Violations were cited in the follo 02B |                | Hot food item not held at or abc Critical        | 25.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 04L |                | Evidence of mice or live mice pr Critical        | 49.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 06D |                | Food contact surface not prope Critical          | 48.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 06C |                | Food not protected from potent Critical          | 18.0          | None  |      |
| x                              | 01/04/2016      | Violations were cited in the follo 02B |                | Hot food item not held at or abc Critical        | 32.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 08A |                | Facility not vermin proof, Harbo Not Critical    | 6.0           | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 08A |                | Facility not vermin proof, Harbo Not Critical    | 10.0          | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 06E |                | Sanitized equipment or utensil, Critical         | 12.0          | A     |      |
| x                              | 01/04/2016      | Violations were cited in the follo 04L |                | Evidence of mice or live mice pr Critical        | 33.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 02B |                | Hot food item not held at or abc Critical        | 27.0          | None  |      |
| x                              | 01/04/2016      | Violations were cited in the follo 02G |                | Cold food item held above 41 $^{\circ}$ Critical | 33.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 22C |                | Bulb not shielded or shatterproc Not Critical    | None          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 08A |                | Facility not vermin proof, Harbo Not Critical    | 64.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 10D |                | Mechanical or natural ventilation Not Critical   | 12.0          | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 02B |                | Hot food item not held at or abc Critical        | 17.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 04L |                | Evidence of mice or live mice pr Critical        | 11.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 10F |                | Non-food contact surface impr. Not Critical      | 8.0           | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 09C |                | Food contact surface not prope Not Critical      | 4.0           | A     |      |
|                                | 01/04/2016      | Violations were cited in the follo 10B |                | Plumbing not properly installed Not Critical     | 53.0          | C     |      |
|                                | 01/04/2016      | Violations were cited in the follo 06F |                | Wiping cloths soiled or not storr Critical       | 49.0          | None  |      |
|                                | 01/04/2016      | Violations were cited in the follo 06C |                | Food not protected from potent Critical          | 12.0          | A     |      |

|  |
|--|
| Open Files   |
| /Users/heangsok/Documents/trimester2_2021/7810ICT Software Technologies/Assignment Part B/Check/New York Restaurant.csv  |
| <input type="button" value="Load File"/> <input type="button" value="Open File"/>  |
| Assignment Tasks   |
| <a href="#">View by Date</a>   <a href="#">View by Date &amp; Keyword</a>   <a href="#">View Violations by Suburbs</a>   <a href="#">View Animal Related Cases</a>   <a href="#">Compare Violation</a> |
| Start Date: <input type="text" value="01/01/2016"/> End Date: <input type="text" value="12/31/2016"/> <input type="button" value="Search"/>  |
| => Assignment Task: For a user-selected period, retrieve all inspection details.   |

[Acknowledgement](#) [Exit](#)

## Analysis 2: Retrieve all violations in Queens, 2016

As shown in the figure 2 below, the data analyst can search and inspect all violation details that happened in Queens, 2016.

Note: all the inspection data are too long to put here; therefore, this student shows only the first page of the data.

*Figure2: Retrieve all violations in Queens, 2016*

The screenshot displays a software application window titled "New York Restaurant Inspection". The main content area is a table showing inspection data for various establishments in Queens, 2016. The columns include CAMIS, DBA, BORO, BUILDING, STREET, ZIPCODE, and PHONE. The table contains numerous rows of data, with some rows highlighted in pink. Below the table, there are sections for "Open Files" and "Assignment Tasks".

| CAMIS    | DBA                           | BORO   | BUILDING | STREET              | ZIPCODE | PHONE      |
|----------|-------------------------------|--------|----------|---------------------|---------|------------|
| 50043804 | JFK PIZZERIA                  | QUEENS | 14621    | ROCKAWAY BLVD       | 11436.0 | 7185292400 |
| 40984001 | LABADEE MANOIR                | QUEENS | 2071315  | JAMAICA AVENUE      | 11428.0 | 7184644400 |
| 41171220 | ESCOLAS                       | QUEENS | 3204     | 36 AVENUE           | 11106.0 | 7184827461 |
| 40707194 | MICHAEL'S RESTAURANT          | QUEENS | 3317     | BROADWAY            | 11106.0 | 7187267474 |
| 40731341 | VILLA RUSTICA RISTORANTE      | QUEENS | 7328     | BELL BOULEVARD      | 11364.0 | 7184795410 |
| 41171220 | ESCOLAS                       | QUEENS | 3204     | 36 AVENUE           | 11106.0 | 7184827461 |
| 50017286 | MR. POLLO #1                  | QUEENS | 4220     | BELL BLVD           | 11361.0 | 7182293064 |
| 40848434 | COFFEE EXPRESS                | QUEENS | 4705     | METROPOLITAN AVENUE | 11385.0 | 7184977074 |
| 40984001 | LABADEE MANOIR                | QUEENS | 2071315  | JAMAICA AVENUE      | 11428.0 | 7184644400 |
| 41650019 | NEW WIN SHING                 | QUEENS | 4806     | BROADWAY            | 11103.0 | 7189569688 |
| 50035047 | APPLE GARDEN                  | QUEENS | 10855    | GUY R BREWER BLVD   | 11433.0 | 7185238361 |
| 50011370 | PANDA KING KITCHEN            | QUEENS | 14911    | 41ST AVE            | 11355.0 | 7183219292 |
| 41609227 | ANNIE CHAN'S RESTAURANT       | QUEENS | 19011    | UNION TURNPIKE      | 11366.0 | 7187401773 |
| 40848434 | COFFEE EXPRESS                | QUEENS | 4705     | METROPOLITAN AVENUE | 11385.0 | 7184977074 |
| 41450604 | BAGELS & CO                   | QUEENS | 18802    | UNION TURNPIKE      | 11366.0 | 7182177755 |
| 40707194 | MICHAEL'S RESTAURANT          | QUEENS | 3317     | BROADWAY            | 11106.0 | 7187267474 |
| 41037850 | TU CASA RESTAURANT            | QUEENS | 11905    | METROPOLITAN AVENUE | 11415.0 | 7184416363 |
| 50043035 | SUBWAY                        | QUEENS | 8020     | JAMAICA AVE         | 11421.0 | 7187150856 |
| 41341837 | BARTOLINO'S RISTORANTE        | QUEENS | 3415     | BROADWAY            | 11106.0 | 7187280430 |
| 50017286 | MR. POLLO #1                  | QUEENS | 4220     | BELL BLVD           | 11361.0 | 7182293064 |
| 50017286 | MR. POLLO #1                  | QUEENS | 4220     | BELL BLVD           | 11361.0 | 7182293064 |
| 50043035 | SUBWAY                        | QUEENS | 8020     | JAMAICA AVE         | 11421.0 | 7187150856 |
| 41609227 | ANNIE CHAN'S RESTAURANT       | QUEENS | 19011    | UNION TURNPIKE      | 11366.0 | 7187401773 |
| 40984001 | LABADEE MANOIR                | QUEENS | 2071315  | JAMAICA AVENUE      | 11428.0 | 7184644400 |
| 40984001 | LABADEE MANOIR                | QUEENS | 2071315  | JAMAICA AVENUE      | 11428.0 | 7184644400 |
| 50004710 | DUNKIN' DONUTS, BASKIN ROBINS | QUEENS | 1030     | 154TH ST            | 11357.0 | 7187670009 |
| 41609227 | ANNIE CHAN'S RESTAURANT       | QUEENS | 19011    | UNION TURNPIKE      | 11366.0 | 7187401773 |
| 41037850 | TU CASA RESTAURANT            | QUEENS | 11905    | METROPOLITAN AVENUE | 11415.0 | 7184416363 |
| 41450604 | BAGELS & CO                   | QUEENS | 18802    | UNION TURNPIKE      | 11366.0 | 7182177755 |
| 41396374 | TASTY ROAST HOUSE             | QUEENS | 5916     | MAIN STREET         | 11355.0 | 7188863118 |
| 41396374 | TASTY ROAST HOUSE             | QUEENS | 5916     | MAIN STREET         | 11355.0 | 7188863118 |
| 50015063 | ESTRELLA LATINA RESTAURANT    | QUEENS | 39-07    | 104TH ST            | 11368.0 | 7185652377 |
| 40529979 | ROMEO'S PIZZERIA              | QUEENS | 18808    | UNION TURNPIKE      | 11366.0 | 7184544223 |
| 41171220 | ESCOLAS                       | QUEENS | 3204     | 36 AVENUE           | 11106.0 | 7184827461 |
| 50017286 | MR. POLLO #1                  | QUEENS | 4220     | BELL BLVD           | 11361.0 | 7182293064 |
| 41396374 | TASTY ROAST HOUSE             | QUEENS | 5916     | MAIN STREET         | 11355.0 | 7188863118 |
| 41553771 | RICO'S CHICKEN                | QUEENS | 14604    | 45 AVENUE           | 11355.0 | 7188861491 |
| 41237756 | PUPUSERIA EL COMAL            | QUEENS | 1486062  | HILLSIDE AVENUE     | 11435.0 | 7185233353 |
| 41562252 | OMONIA NEXT DOOR              | QUEENS | 3216     | BROADWAY            | 11106.0 | 7182746650 |
| 41396374 | TASTY ROAST HOUSE             | QUEENS | 5916     | MAIN STREET         | 11355.0 | 7188863118 |
| 41650019 | NEW WIN SHING                 | QUEENS | 4806     | BROADWAY            | 11103.0 | 7189569688 |
| 41553771 | RICO'S CHICKEN                | QUEENS | 14604    | 45 AVENUE           | 11355.0 | 7188861491 |
| 41226135 | LAS MAGARITAS                 | QUEENS | 3801     | BROADWAY            | 11103.0 | 7187771707 |
| 40848434 | COFFEE EXPRESS                | QUEENS | 4705     | METROPOLITAN AVENUE | 11385.0 | 7184977074 |
| 41609227 | ANNIE CHAN'S RESTAURANT       | QUEENS | 19011    | UNION TURNPIKE      | 11366.0 | 7187401773 |
| 41226135 | LAS MAGARITAS                 | QUEENS | 3801     | BROADWAY            | 11103.0 | 7187771707 |
| 50035047 | APPLE GARDEN                  | QUEENS | 10855    | GUY R BREWER BLVD   | 11433.0 | 7185238361 |
| 41553771 | RICO'S CHICKEN                | QUEENS | 14604    | 45 AVENUE           | 11355.0 | 7188861491 |
| 50004710 | DUNKIN' DONUTS, BASKIN ROBINS | QUEENS | 1030     | 154TH ST            | 11357.0 | 7187670009 |
| 40984001 | LABADEE MANOIR                | QUEENS | 2071315  | JAMAICA AVENUE      | 11428.0 | 7184644400 |
| 40707194 | MICHAEL'S RESTAURANT          | QUEENS | 3317     | BROADWAY            | 11106.0 | 7187267474 |

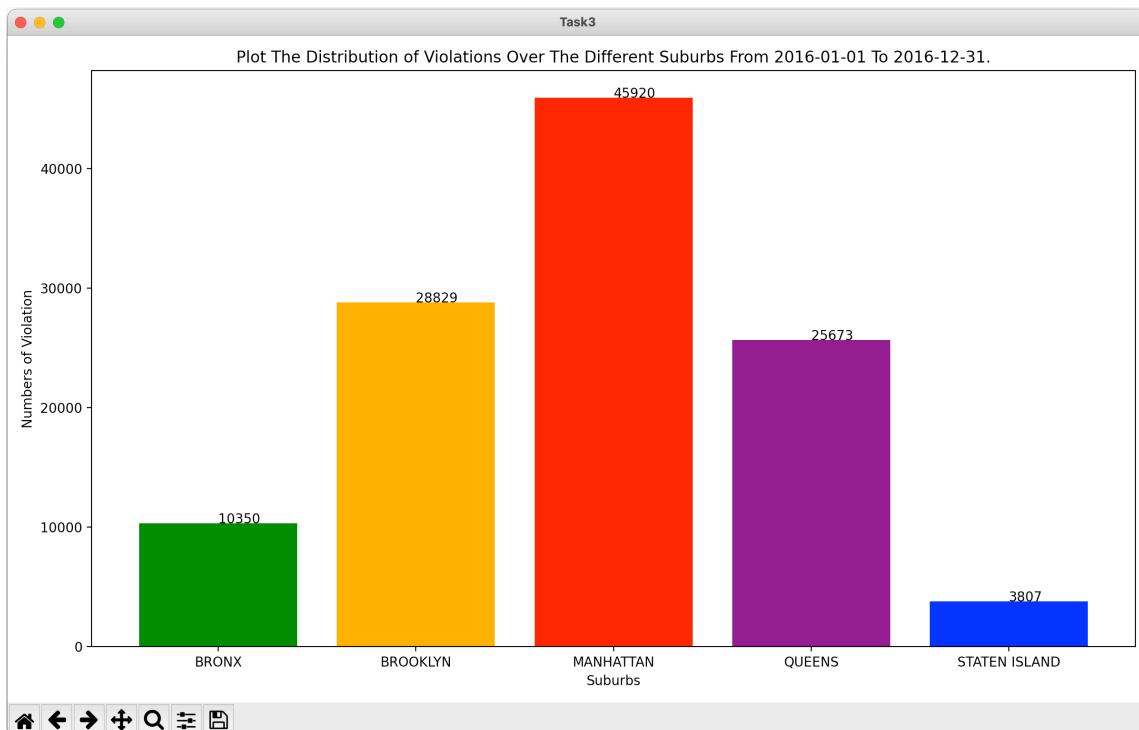
Open Files

Assignment Tasks  
      
Start Date: 01/01/2016 End Date: 12/31/2016 Keyword: Queens Search  
=> Assignment Task: For a user-selected period, retrieve all violations that contain a keyword.

### Analysis 3: Plot the distribution of violations over the different suburbs in 2016

According to the result below, the Manhattan suburb has the most violations (45920 cases) while the Staten Island has the least violations (3807 cases).

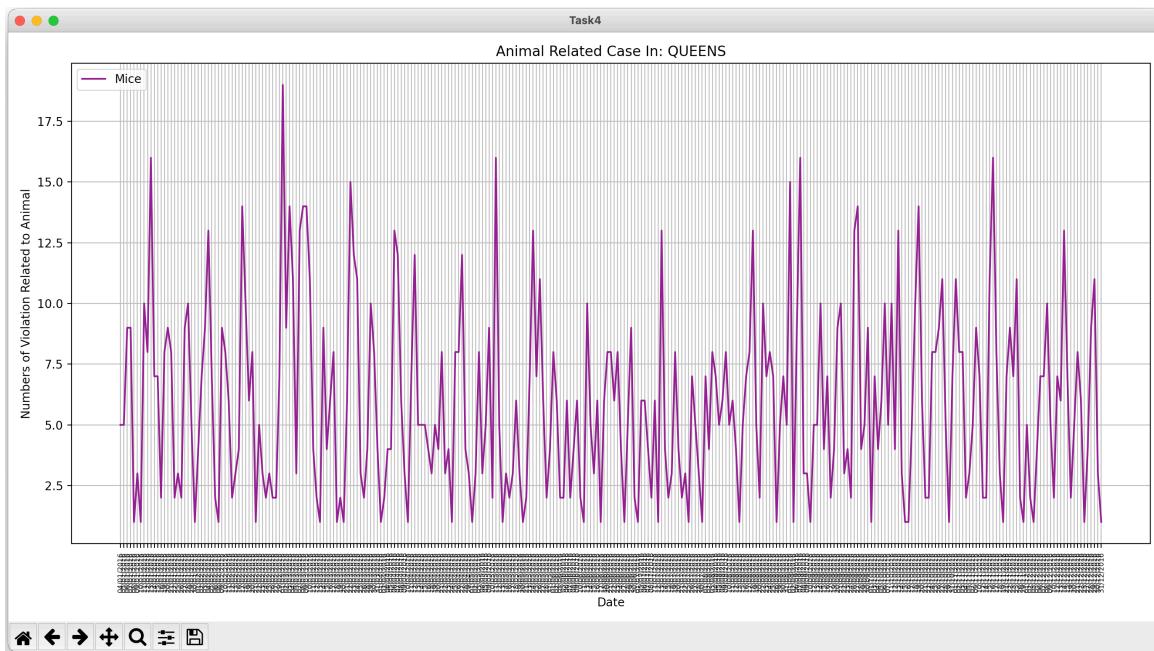
*Figure3: Plot the distribution of violations over the different suburbs in 2016*



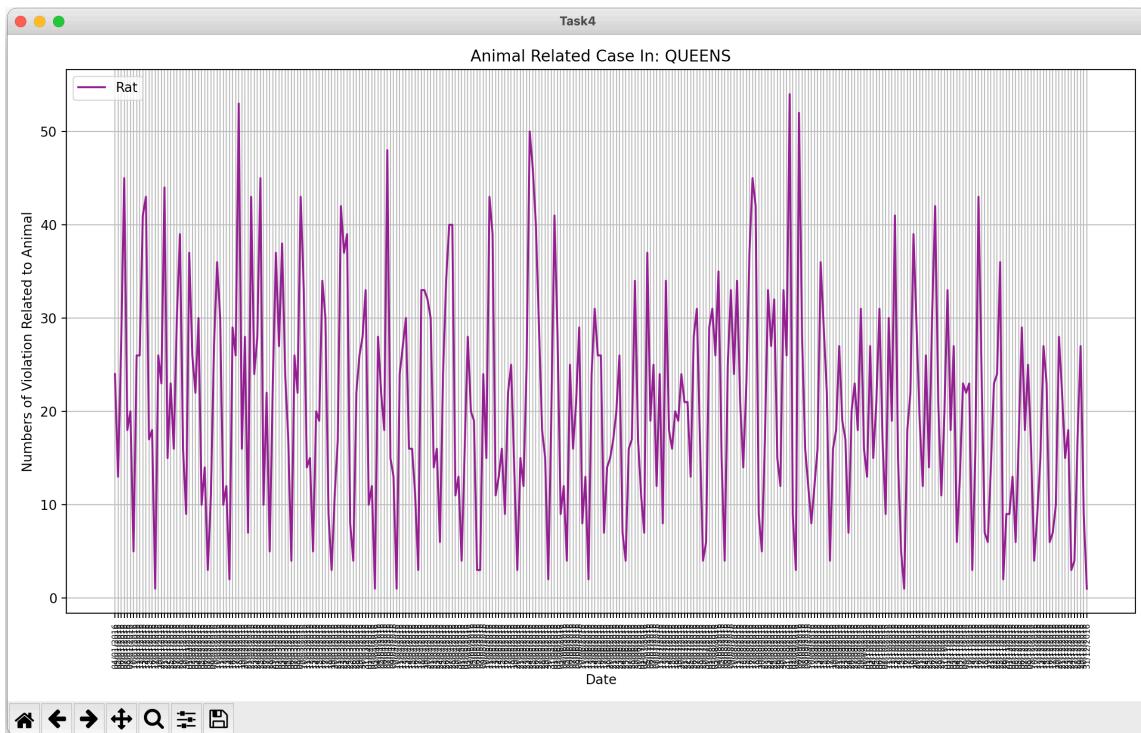
### Analysis 4: Analyze the cases related to animals, and their trend over time and distribution over suburbs

The figure below shows that the numbers of rat related violation seems to be higher than mice related violation in Queens, 2016. Moreover, the animal related cases seem to be high from August to late October. This might be because the weather starts to get cool during these months, and the animals would search for a warmer shelter inside the building.

*Figure4: Analyze the cases related to mice in Queens, 2016*



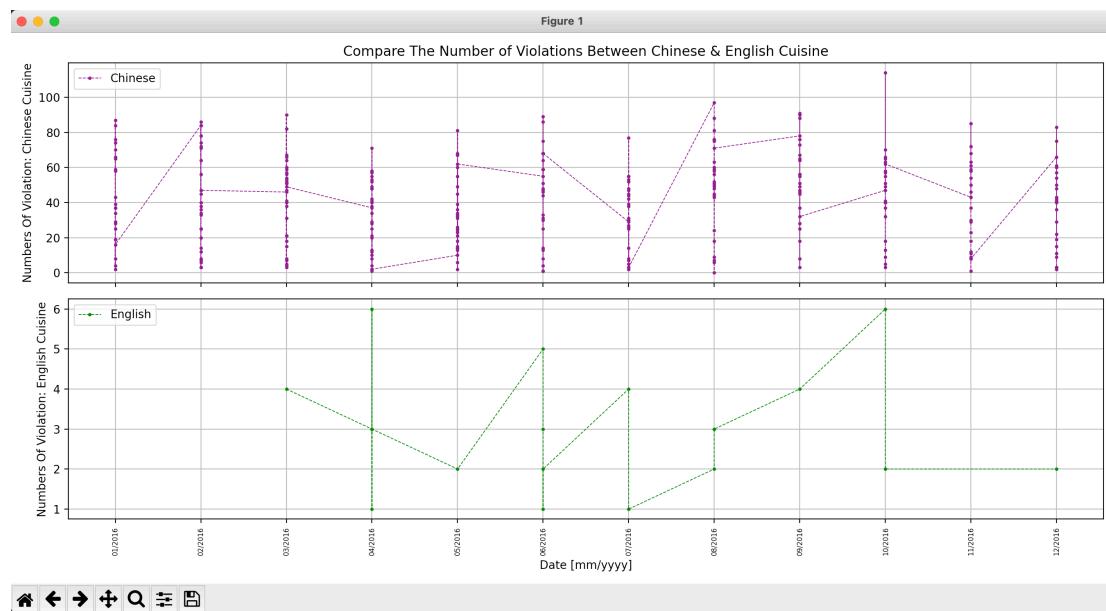
*Figure5: Analyze the cases related to rat in Queens, 2016*



## Analysis 5: Compare the number of violations between two cuisines in 2016

The statistic below shows that, in 2016, Chinese restaurants had committed more violations than other restaurants.

*Figure6: Compare the numbers of violations between Chinese and English cuisine in 2016*



*Figure7: Compare the numbers of violations between Chinese and Thai cuisine in 2016*

