

Lab 14.1 - Restaurant & Health Codes

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```
library(tidyverse)
```

The goal of this exercise is to visualize health code violations in New York City restaurants.

Following the instructions given in Section 18.6, Problem 1.

We need to limit the number of addresses we geocode because they take around 1 second each to process.

```
library(mdsr)
library(tidygeocoder)

violations_selected <- Violations %>%
  count(camis, dba, boro, building, street, zipcode) %>%
  filter(n > 92)

violations_selected
```

```
## # A tibble: 6 x 7
##   camis dba                boro    building street  zipcode    n
##   <int> <chr>              <chr>    <int> <chr>    <int> <int>
## 1 41320205 DAI WAH YUMMY CITY BROOKLYN    7218 18 AVEN~  11204    96
## 2 41510846 218 RESTAURANT    MANHATTAN  218220 GRAND S~  10013    94
## 3 41543033 NEW STAR SEAFOOD RESTAURANT BROOKLYN    1217 AVENUE U  11229    94
## 4 41586091 FENG CHENG YUAN RESTAURANT MANHATTAN    100 BOWERY ~  10013    94
## 5 41602559 RED CHOPSTICK    QUEENS     13617 41 AVEN~  11355    96
## 6 41690948 TIO POLLO RESTAURANT QUEENS      1921 MOTT AV~  11691    93
```

Here we compute the geo-coordinates, filtering out an outlier that's actually in Rochester, NY.

```
library(sf)
```

```
## Linking to GEOS 3.9.3, GDAL 3.5.2, PROJ 8.2.1; sf_use_s2() is TRUE
```

```
violations_geom <- violations_selected %>%
  mutate(address = paste(building, " ", street, " ", boro, " ", NY, " ", zipcode)) %>%
  tidygeocoder::geocode(address, method = "osm") %>%
  na.omit() %>%
  filter(lat < 41.0) %>%
  st_as_sf(coords = c("long", "lat")) %>%
  st_set_crs(4326)
```

```
## Passing 6 addresses to the Nominatim single address geocoder
```

```
## Query completed in: 6.4 seconds
```

```
violations_geom
```

```
## Simple feature collection with 3 features and 8 fields
```

```
## Geometry type: POINT
```

```
## Dimension: XY
```

```
## Bounding box: xmin: -73.99128 ymin: 40.59877 xmax: -73.76599 ymax: 40.71747
```

```
## Geodetic CRS: WGS 84
```

```
## # A tibble: 3 x 9
```

```
##   camis dba boro build~1 street zipcode n address
```

```
## *   <int> <chr> <chr> <int> <chr> <int> <int> <chr>
```

```
## 1 41510846 218 RESTAURANT MANH~ 218220 GRAND~ 10013 94 218220~
```

```
## 2 41543033 NEW STAR SEAFOOD RESTAURA~ BROO~ 1217 AVENU~ 11229 94 1217 ,~
```

```
## 3 41690948 TIO POLLO RESTAURANT QUEE~ 1921 MOTT ~ 11691 93 1921 ,~
```

```
## # ... with 1 more variable: geometry <POINT [°]>, and abbreviated variable name
```

```
## # 1: building
```

```
library(ggspatial)
```

```
violations_geom %>%
```

```
  ggplot() +
```

```
  aes(size = n) +
```

```
  annotation_map_tile(zoomin = 0, type = "osm") +
```

```
  geom_sf()
```

```
## Loading required namespace: raster
```

```
## Zoom: 13
```



See `lab141-restaurants-solution.Rmd` for the leaflet version.