Mapping-Restaurants

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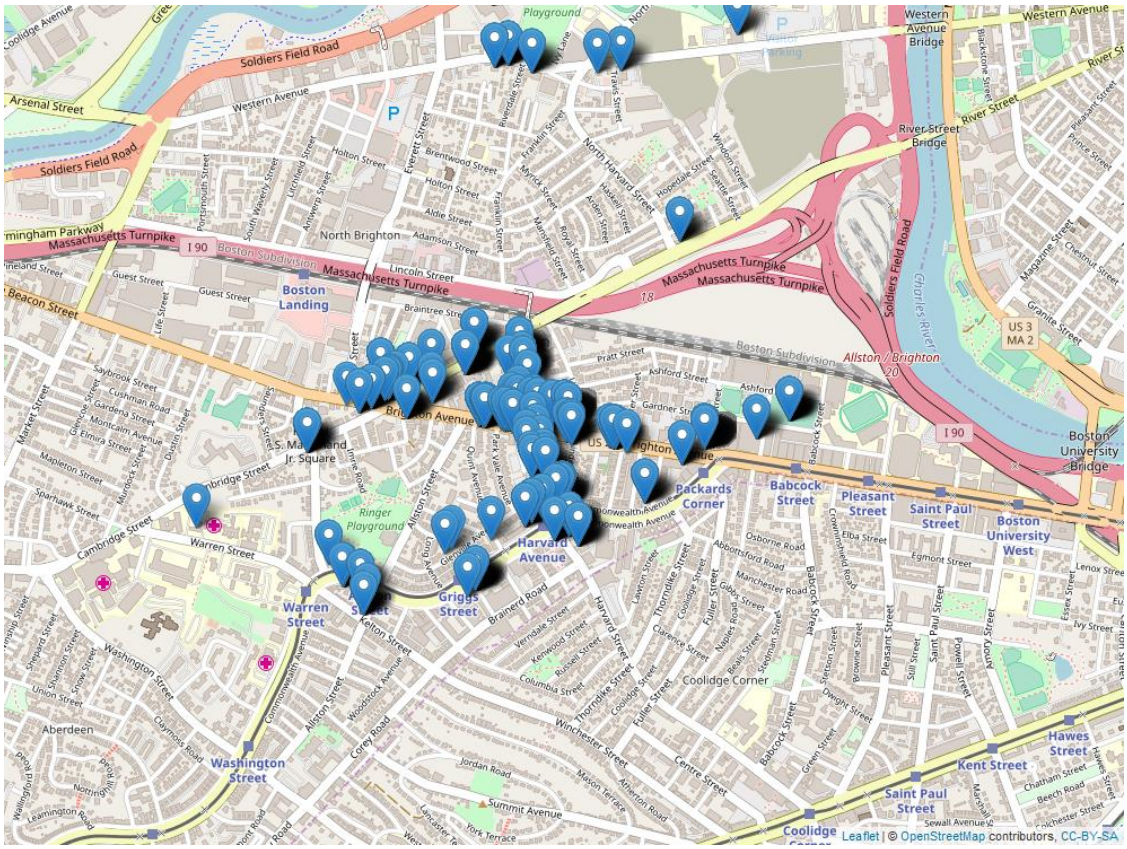
Nov 6, 2018

Deal with the data

```
data <- read.csv("mayorsfoodcourt.csv", na.strings = c("", "NA"))
# Select the most severe violation of restaurants in Allson
library(dplyr)

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union

Allston <- data %>%
  filter(CITY == "Allston") %>%
  filter(Location != "NA" & ViolStatus == "Fail" & ViolLevel == "***")

# Devide the location into longitude and latitude
Allston$Location<- as.character(Allston$Location)
Allston$long <- as.numeric(substring(Allston$Location, 16, 28))
Allston$lat <- as.numeric(substring(Allston$Location, 2, 13))
Allston$ViolLevel <- as.character(Allston$ViolLevel)
```

Map 1: Leaflet map

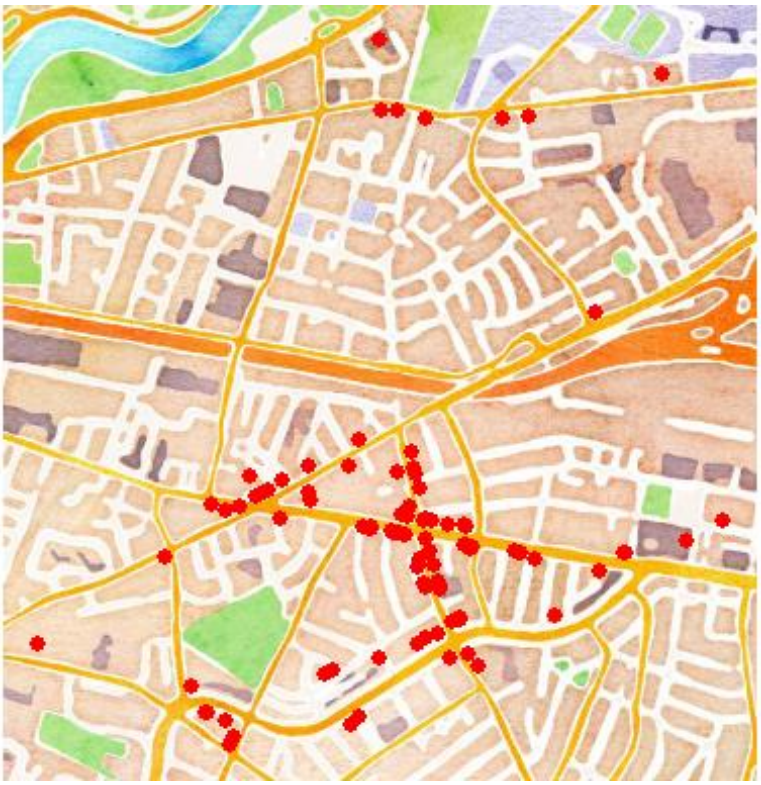
```
#install.packages("mapview")
library(mapview)
library(leaflet)
library(knitr)
m <- Allston[, c("lat", "long")]%>%
  leaflet()%>%
  addTiles()%>%
  addMarkers()%>%
  setView(-71.13062, 42.35308, zoom = 15)
mapshot(m, file = "Rplot.png")
knitr::include_graphics("Rplot.png")
```



The map shows the locations of restaurants where the most severe violation level happened in Allston.

Map 2: Static map

```
library(ggmap)
library(ggplot2)

qmplot(long, lat, data = Allston, maptype = "watercolor", zoom = 15,
       color = I("red"), size = I(2.5))
```



The map shows the locations of restaurants where the most severe violation level happened in Allston.

Map 3: Google map

Because we should use the key for the google map, but the key we have gotten is invalid, we just put the code here.

```
Allston <- data %>%
  filter(CITY == "Allston") %>%
  filter(Location != "NA" & ViolStatus == "Fail")

# Devide the location into longitude and latitude
Allston$Location<- as.character(Allston$Location)
Allston$long <- as.numeric(substring(Allston$Location, 16, 28))
Allston$lat <- as.numeric(substring(Allston$Location, 2, 13))

#map <- get_googlemap(center = c(-71.13062, 42.35660), zoom = 15, key =
"AIzaSyDsMKikezjPO_1HDzS_QpUX1_wC49M006E")
#ggmap(map)+
  #geom_point(aes(x = long, y = lat, colour = ViolLevel), data = Allsto
n) +
  #scale_colour_discrete(name="Violation Level")
```

The map would show the locations of restaurants where the violations in different levels happened in Allston.