Request Numbers & Population by Zip Code

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```
library(ggplot2)
library(ggmap)

library(devtools)
install_github('arilamstein/choroplethrZip@v1.5.0')
library(choroplethrZip)
library(dplyr)

pop= read.csv("Populations.csv")
load("311.rda")
```

```
### GET REQUEST COUNT BY ZIP CODE

# summarize the request count by zip code
data_zip=
data %>%
  group_by(ZipCode) %>%
  summarise(Request_Number= n())

# clean the data
data_zip[12, 2]= 37063
data_zip[53, 2]= 11202
data_zip= data_zip[-(143:147), ]
data_zip= data_zip[-(1:2), ]

# get long and lat of zipcodes
library(zipcode)
data(zipcode)   #lat and long reference of zipcode
colnames(data_zip)[1]= "zip"
zipnew= merge(zipcode, data_zip, by="zip")
```

```
### GET POPULATION DATA FOR CHOROPLETH
zipref_new= merge(pop, zipnew, by.x= "Zip.Code", by.y= "zip")
# format the dataset for choropleth function in choroplethr package
zipref_new= zipref_new[, -(3:12)]
colnames(zipref_new)[1]= "region"
colnames(zipref_new)[2]= "value"
zipref_new$region= as.character(zipref_new$region)
str(zipref_new)
```

```
## 'data.frame':    139 obs. of  2 variables:
##  $ region: chr  "90001" "90002" "90003" "90004" ...
##  $ value : int  57110 51223 66266 62180 37681 59185 40920 32327 3800 103892 ...
```

```
range= zipref_new[, 1]
zip_choro= zip_choropleth(zipref_new,
                          zip_zoom = range,
                          title= "Request Numbers and Population by Zip Code",
                          legend = "Population by Zip Code",
                          reference_map = TRUE)
```

```
## Map from URL : http://maps.googleapis.com/maps/api/staticmap?center=34.089181,-118.37702&zoom=10&siz
```

```
## Scale for 'x' is already present. Adding another scale for 'x', which
## will replace the existing scale.
```

```
## Scale for 'y' is already present. Adding another scale for 'y', which
## will replace the existing scale.
```

```
zip_choro +
  geom_point(dat=zipnew,
             aes(x=longitude, y=latitude, size= Request_Number),
             alpha=0.3, col= "brown")
```

```
## Warning: Removed 1 rows containing missing values (geom_rect).
```

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