Bridges Plots

Rachel Kostrzewa

1/30/2017

```
library(plyr)
library(choroplethr)
```

```
## Loading required package: acs
```

```
## Loading required package: stringr
```

```
## Loading required package: XML
```

```
##
## Attaching package: 'acs'
```

```
## The following object is masked from 'package:base':
##
##     apply
```

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following object is masked from 'package:acs':
##
##     combine
```

```
## The following objects are masked from 'package:plyr':
##
##     arrange, count, desc, failwith, id, mutate, rename, summarise,
##     summarize
```

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

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

```
library(readr)
library(data.table)
```

```
## ------------------------------------------------------------------------------
```

```
## data.table + dplyr code now lives in dtplyr.
## Please library(dtplyr)!
```

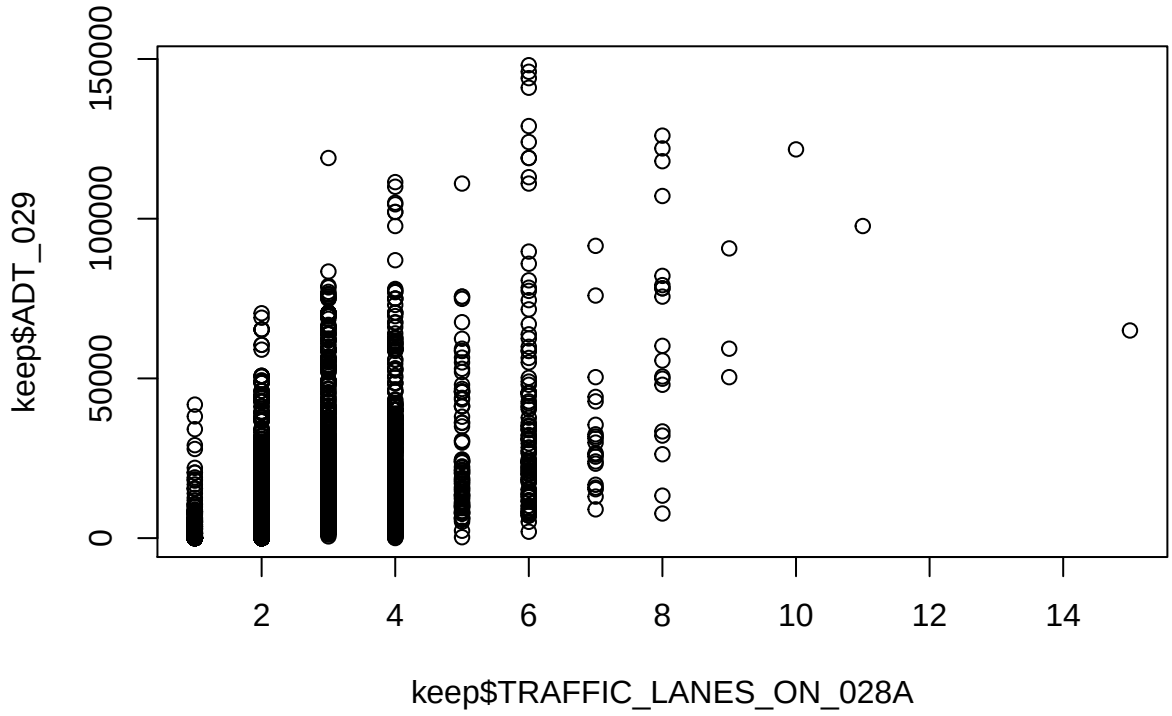
```
## ------------------------------------------------------------------------------
```

```
##
## Attaching package: 'data.table'
```

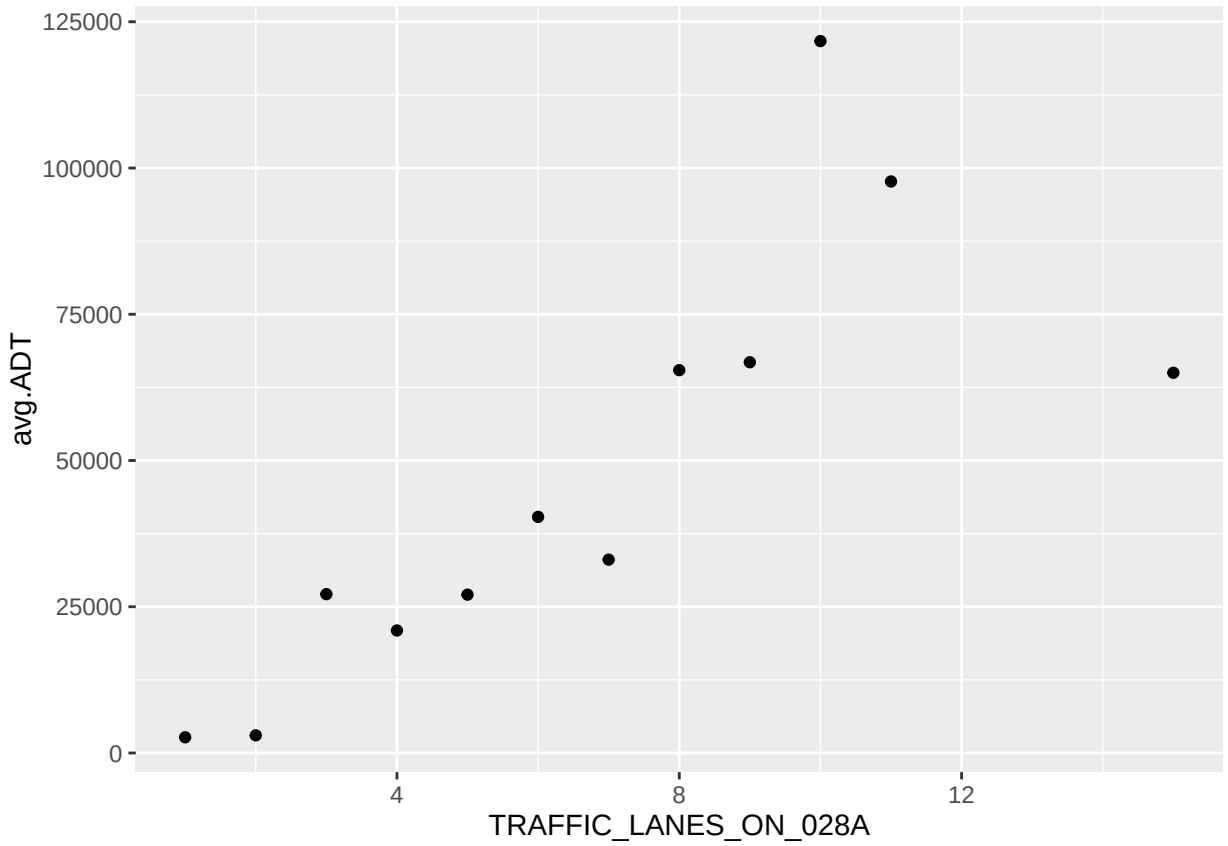
```
## The following objects are masked from 'package:dplyr':
##
##     between, last
```

```
library(ggplot2)
```

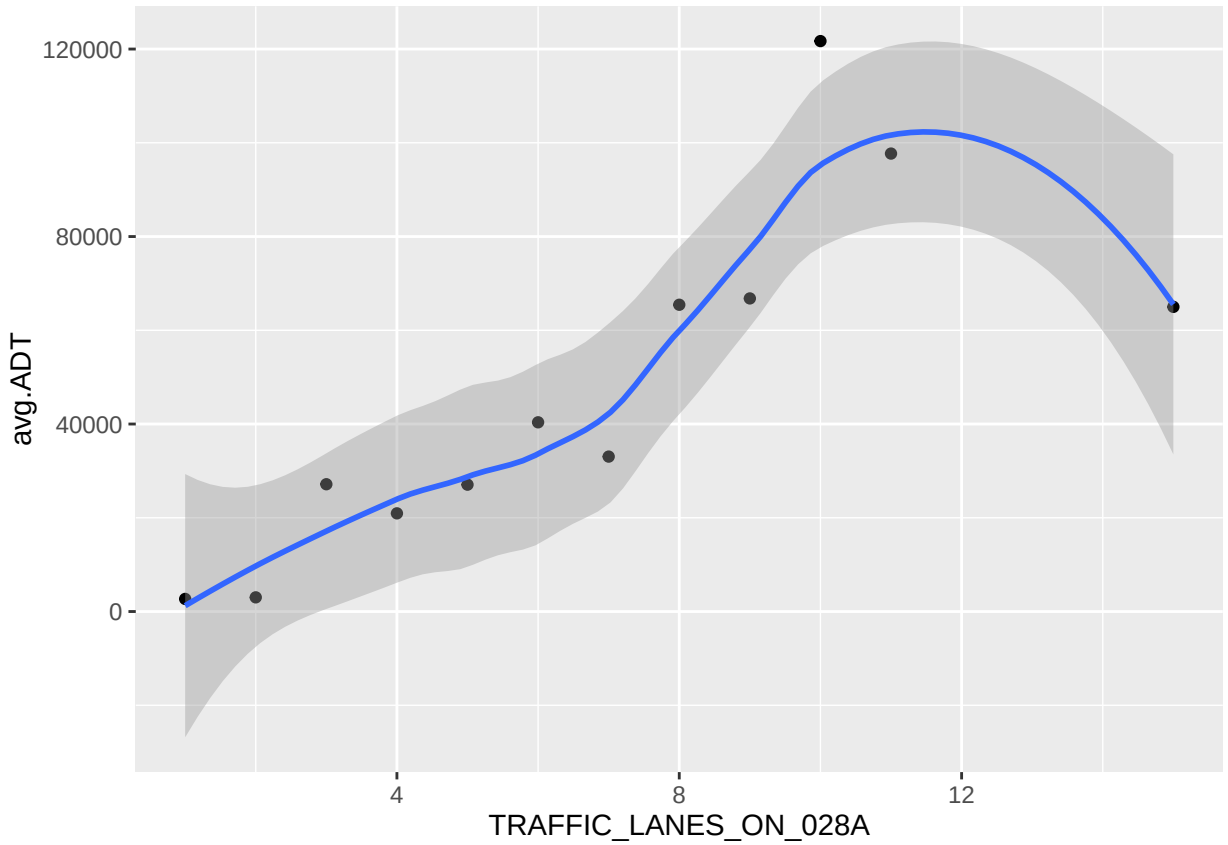
```
data = "https://www.fhwa.dot.gov/bridge/nbi/2016/delimited/WI16.txt"
temp = fread(data)
classes = sapply(temp, class)
temp2 = fread(data, colClasses = classes)

T = temp2

keep = select(T, STATE_CODE_001, COUNTY_CODE_003,
              STRUCTURE_NUMBER_008, YEAR_BUILT_027, TRAFFIC_LANES_ON_028A,
              ADT_029)

keep = mutate(keep, FIPS = ((STATE_CODE_001 * 1000) + COUNTY_CODE_003))

plot(x = keep$TRAFFIC_LANES_ON_028A, y = keep$ADT_029)
```



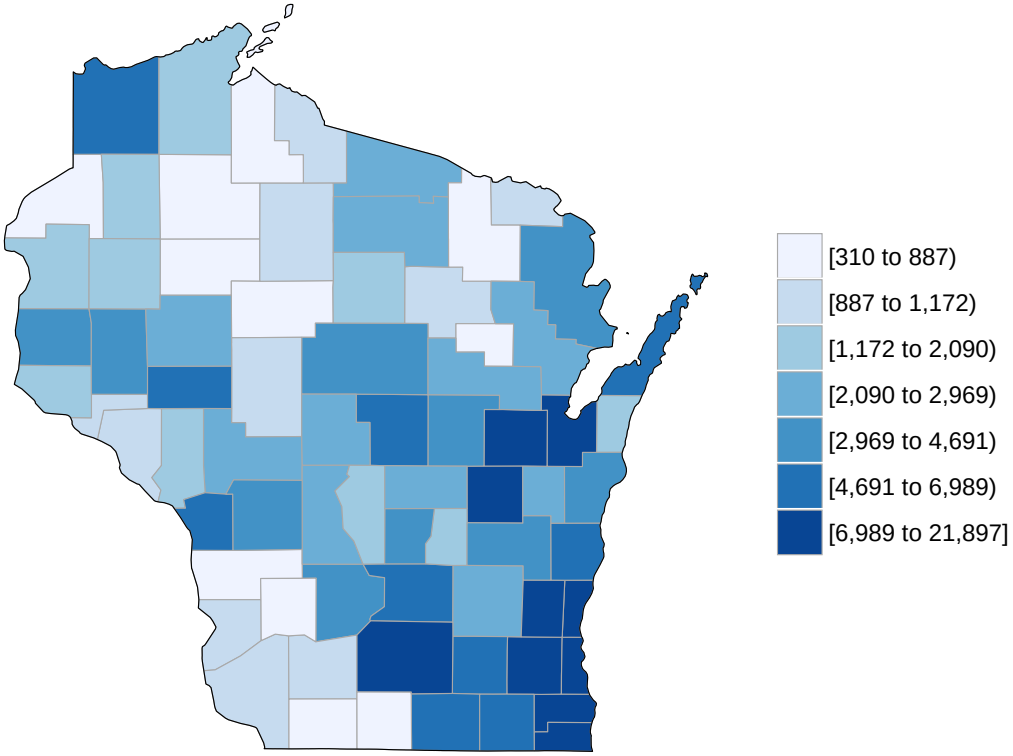

```
#trend with average daily traffic and traffic lanes
keep %>% group_by(TRAFFIC_LANES_ON_028A) %>%
  summarize(avg.ADT = mean(ADT_029)) %>%
  ggplot(mapping = aes(x=TRAFFIC_LANES_ON_028A, y = avg.ADT)) +
  geom_point()
```




```
keep %>% group_by(TRAFFIC_LANES_ON_028A) %>%
  summarize(avg.ADT = mean(ADT_029)) %>%
  ggplot(mapping = aes(x=TRAFFIC_LANES_ON_028A, y = avg.ADT)) +
  geom_point() + geom_smooth()
```




```
#looking at average daily traffic by county
dat2 = keep %>% group_by(FIPS) %>% summarize(avg.ADT = mean(ADT_029))

dat2 %>% transmute(region = FIPS, value = avg.ADT) %>% county_choropleth(state_zoom = "wisconsin")
```




```
#looking at average lanes on bridges by county, looks very similar to previous map
dat3 = keep %>% group_by(FIPS) %>% summarize(avg.lanes = mean(TRAFFIC_LANES_ON_028A))

dat3 %>% transmute(region = FIPS, value = avg.lanes) %>% county_choropleth(state_zoom = "wisconsin")
```