concise plotting tips

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2019-03-11

Initialization

```
library(tidyverse)
library(data.table)
library(xtable)
```

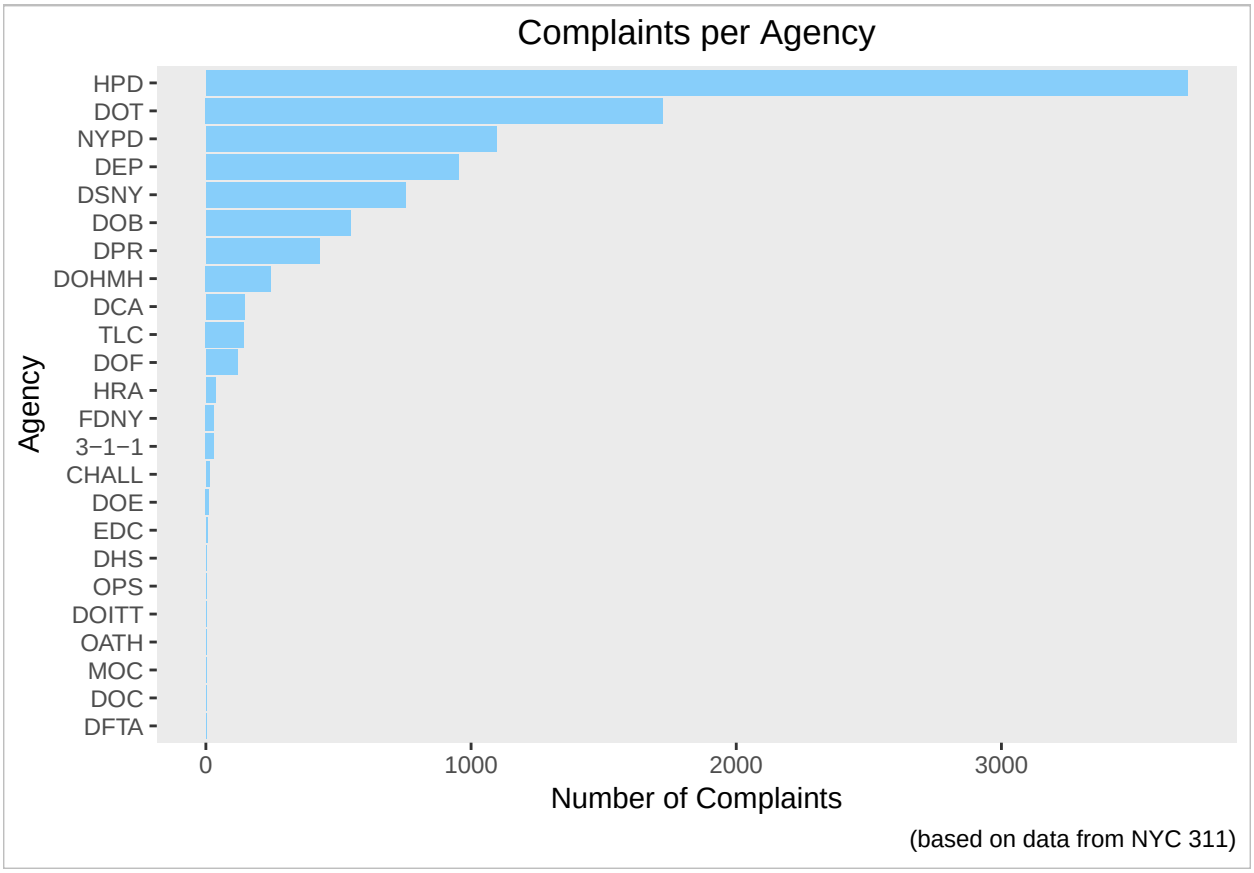
File Reading

```
samplemini<-fread("mini311.csv")
```

Example from Maitha

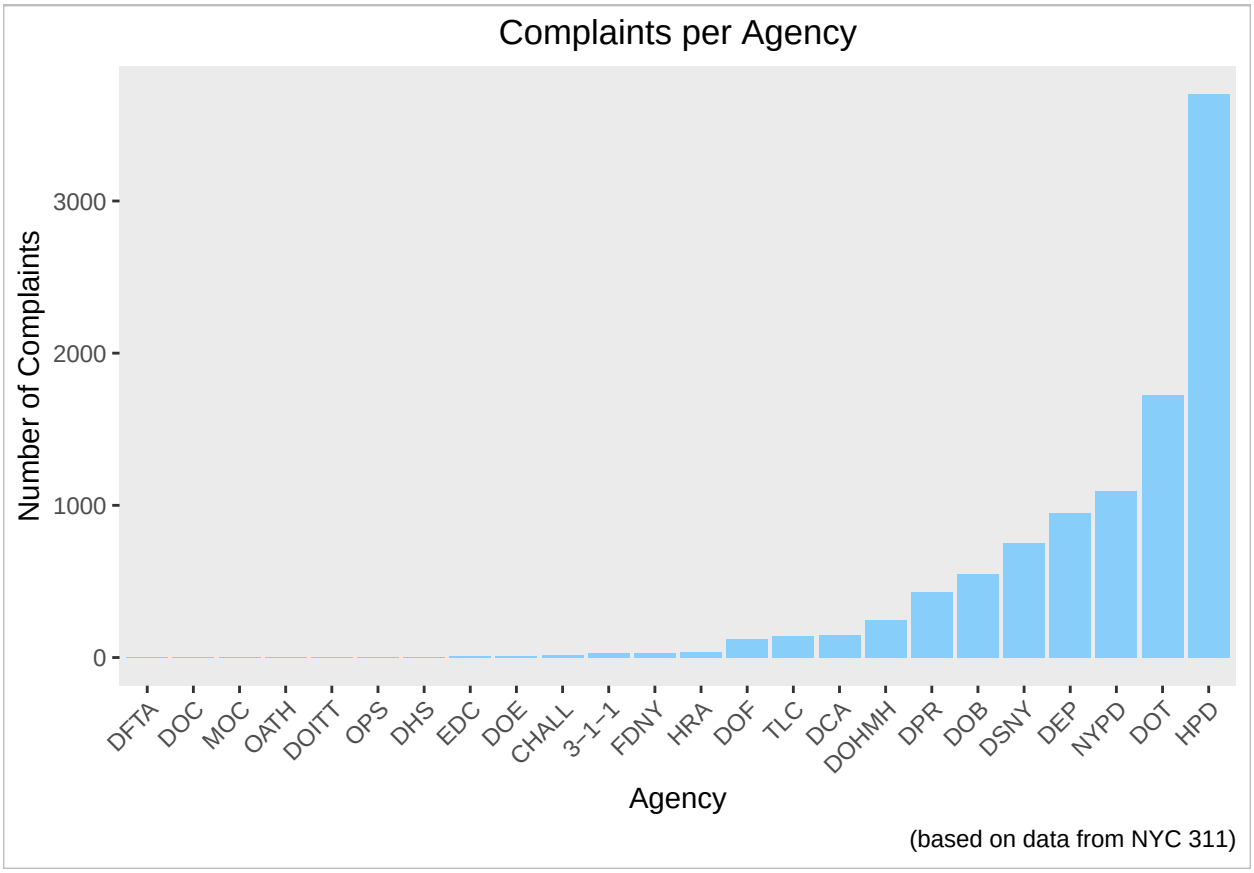
```
maxAgency <- samplemini %>%
  group_by(Agency) %>%
  summarize(count=n()) %>%
  filter(count>0)
  maxAgency$Agency<-factor(maxAgency$Agency,
  levels=maxAgency$Agency[order(maxAgency$count)])

ggplot(data = maxAgency, mapping = aes(x=Agency,y=count))+
  geom_bar(stat="identity", fill = "#87CEFA") +
  ggtitle("Complaints per Agency")+
  xlab("Agency")+
  ylab("Number of Complaints")+
  theme(panel.grid.major = element_blank(),
        panel.grid.minor = element_blank(),
        plot.background = element_rect(fill = "transparent",colour = "gray"),
        plot.title = element_text(hjust = 0.5))+
  coord_flip() +
  labs(caption = "(based on data from NYC 311)")
```



Example with diagonal labels

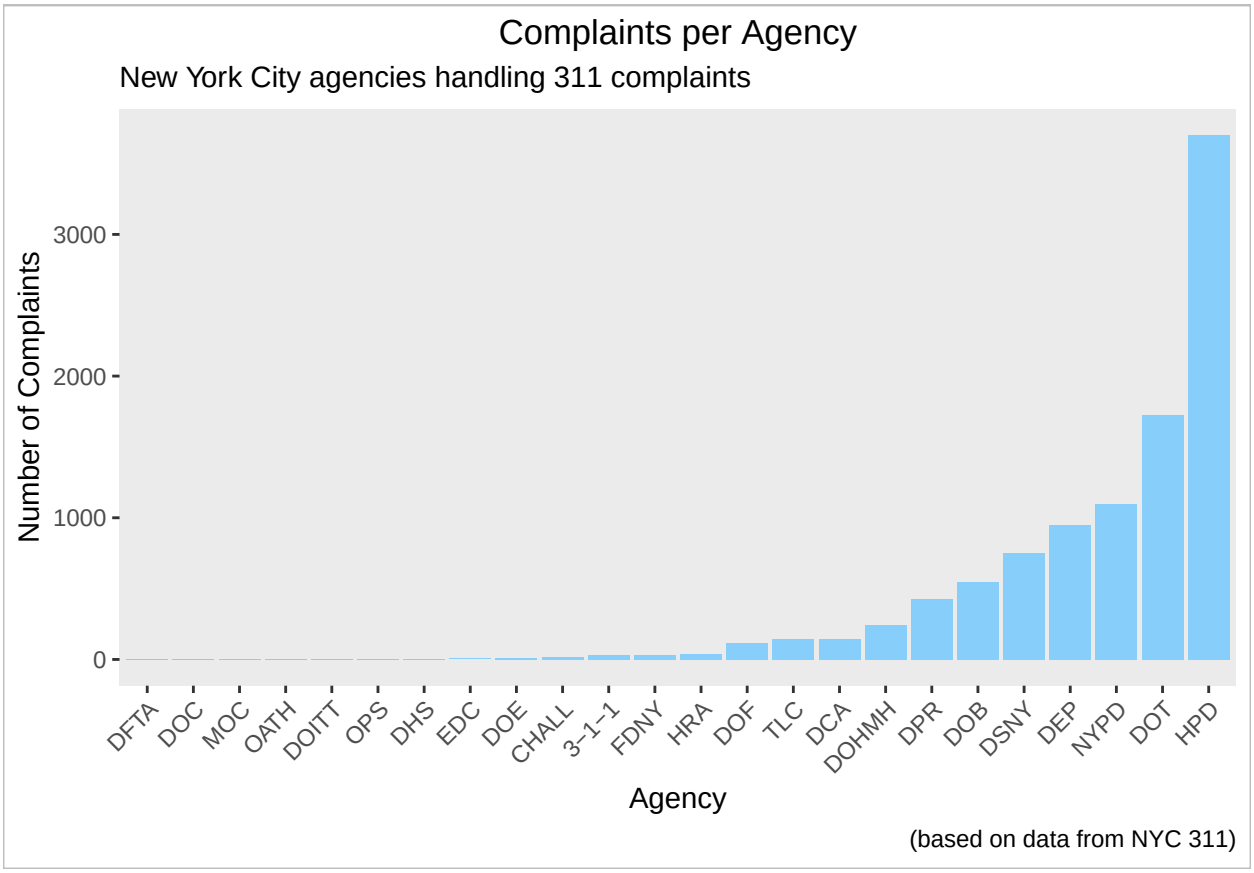
```
ggplot(data = maxAgency, mapping = aes(x=Agency,y=count))+
  geom_bar(stat="identity", fill = "#87CEFA") +
  ggtitle("Complaints per Agency")+
  xlab("Agency")+
  ylab("Number of Complaints")+
  theme(panel.grid.major = element_blank(),
        panel.grid.minor = element_blank(),
        plot.background = element_rect(fill = "transparent",colour = "gray"),
        plot.title = element_text(hjust = 0.5))+
  theme( axis.text.x = element_text(angle = 45, hjust = 1))+
  labs(caption = "(based on data from NYC 311)")
```



Example using slow ggplotting

This example uses a technique called *slow ggplotting*, popularized by a guide called *The ggplot flipbook*, available at https://evamaerey.github.io/ggplot_flipbook/ggplot_flipbook_xaringan.html . This technique adds each element one at a time. You can comment out all but the first element and run the chunk, then add one element at a time, rerunning the chunk to see the effect of adding each element separately.

```
ggplot(maxAgency)+
  aes(x=Agency)+
  aes(y=count)+
  geom_bar(stat="identity", fill = "#87CEFA") +
  labs(title="Complaints per Agency")+
  labs(subtitle="New York City agencies handling 311 complaints")+
  labs(x="Agency")+
  labs(y="Number of Complaints")+
  labs(caption = "(based on data from NYC 311)")+
  theme(panel.grid.major = element_blank())+
  theme(panel.grid.minor = element_blank())+
  theme(plot.background = element_rect(fill = "transparent",colour = "gray"))+
  theme(plot.title = element_text(hjust = 0.5))+
  theme( axis.text.x = element_text(angle = 45, hjust = 1))
```


Complaints per Agency
New York City agencies handling 311 complaints
Number of Complaints
3000
2000
1000
0
DFTA
DOC
MOC
OATH
DOITT
OPS
DHS
EDC
DOE
CHALL
3−1−1
FDNY
HRA
DOF
TLC
DCA
DOHMH
DPR
DOB
DSNY
DEP
NYPD
DOT
HPD
Agency
(based on data from NYC 311)