

Boston Fires June 2018

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This is a dataset of all fires in Boston in June of 2018.

Setup

Here, I import the dataset and load tidyverse. Then, I attempt to trim all the whitespace from the neighborhood strings. Finally, summary data.

```
data = read.csv("fire_june_2018.csv", header = TRUE, strip.white = TRUE)
summary(data)
```

```

##      Incident.Number Exposure.Number      Alarm.Date      Alarm.Time
## 18-0039002:    4    Min.      :0.000000 06/28/2018: 204 12:13:26:    4
## 18-0041203:    2    1st Qu.:0.000000 06/26/2018: 163 18:37:04:    3
## 18-0035078:    1    Median :0.000000 06/27/2018: 161 18:54:18:    3
## 18-0035079:    1    Mean   :0.001691 06/29/2018: 157 19:52:08:    3
## 18-0035080:    1    3rd Qu.:0.000000 06/15/2018: 153 20:04:46:    3
## 18-0035081:    1    Max.    :3.000000 06/22/2018: 151 00:33:22:    2
## (Other)      :4130                      (Other)      :3151 (Other) :4122
## Incident.Type
## 553      : 712
## 600      : 388
## 714      : 275
## 611      : 241
## 113      : 216
## 745      : 215
## (Other):2093
##
##      Incident.Description
## Public service                      : 712
## Good intent call, Other              : 388
## Central station, malicious false alarm : 275
## Dispatched & cancelled en route      : 241
## Cooking fire, confined to container   : 216
## Alarm system activation, no fire - unintentional : 215
## (Other)                              :2093
## Estimated.Property.Loss Estimated.Content.Loss District
## Min.      :    0.0      Min.      :    0.00    04      :780
## 1st Qu.:    0.0      1st Qu.:    0.00    03      :624
## Median :    0.0      Median :    0.00    09      :594
## Mean   :   341.7      Mean   :    69.91    07      :490
## 3rd Qu.:    0.0      3rd Qu.:    0.00    06      :407
## Max.    :700000.0      Max.    :100000.00    08      :397
##                                     (Other):848
##      City.Section
## BO      :1244
## DO      : 648
## RX      : 619
## BR      : 331
## SB      : 251
## JP      : 212
## (Other) : 835
##
##      Neighborhood      Zip
## Boston                  :1244  Min.      :    0
## Dorchester              : 648  1st Qu.:2118
## Roxbury                 : 619  Median :2124
## Allston-Brighton        : 331  Mean   :2119
## South Boston            : 251  3rd Qu.:2130
## Jamaica Plain           : 212  Max.    :2467
## (Other)                 : 835
## Property.Use
## 429      : 955
## 900      : 497
## 400      : 310
## 419      : 272

```

```
## 960      : 265
##          : 262
## (Other):1579
##
##          Property.Description
## Multifamily dwelling          : 955
## Outside or special property, Other : 497
## Residential, Other           : 310
## 1 or 2 family dwelling       : 272
## Street, Other                : 265
##                             : 262
## (Other)                      :1579
## Street.Number Street.Prefix Street.Name
##          : 602      :3970 WASHINGTON      : 184
## 1          : 97      E : 70 MASSACHUSETTS : 88
## 10         : 62      N : 15 BOYLSTON       : 83
## 20         : 56      S : 22 HUNTINGTON      : 82
## 50         : 50      W : 63 DORCHESTER      : 69
## 100        : 46      BLUE HILL      : 67
## (Other) :3227      (Other)          :3567
## Street.Suffix Street.Type
##      :4129      ST      :2547
## E : 4      AVE      : 842
## N : 2      RD      : 258
## S : 3      : 132
## W : 2      BLVD      : 60
##      WAY      : 52
##      (Other): 249
##
##          Address.2      XStreet.Prefix
##          :2828      :4110
## : @SHELTER-SOUTHAMPTON ST, RX      : 10 E : 15
## : @INNER HARBOR (MYSTIC-TOBIN BRIDGE TO : 9 N : 6
## : #12-1251      : 9 S : 1
## : @BHA-PATRICIA WHITE      : 7 W : 8
## : #13-2291      : 7
## (Other)          :1270
##
##          XStreet.Name XStreet.Suffix XStreet.Type
##          :3602 Mode:logical      :3611
## WASHINGTON      : 20 NA's:4140 ST      : 367
## SOUTHAMPTON      : 15 AVE      : 87
## MASSACHUSETTS      : 14 RD      : 29
## MELNEA CASS      : 13 BLVD      : 19
## SHAWMUT      : 10 PKWY      : 7
## (Other)      : 466 (Other): 20
```

Bar Chart

Next, I build a bar chart showing total number of fires by neighborhood. For some reason, I can't get the whitespace in the x labels to go away :(

```
library(tidyverse)
```

```
## — Attaching packages —
tidyverse 1.2.1 —
```

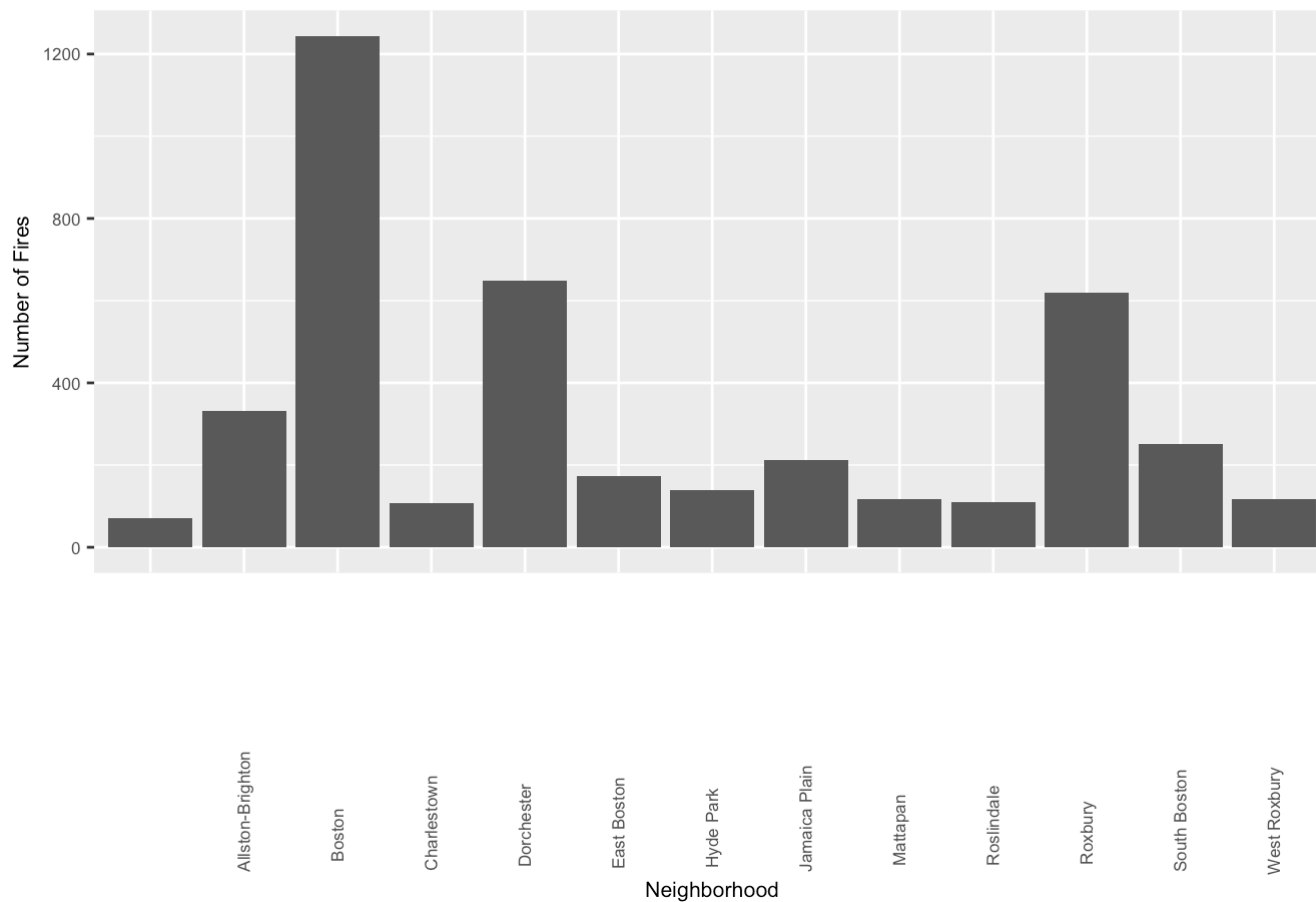
```
## ✔ ggplot2 3.0.0    ✔ purrr  0.2.4
## ✔ tibble  1.4.2    ✔ dplyr  0.7.4
## ✔ tidyr   0.8.0    ✔ stringr 1.2.0
## ✔ readr   1.1.1    ✔ forcats 0.2.0
```

```
## Warning: package 'ggplot2' was built under R version 3.4.4
```

```
## — Conflicts —
tidyverse_conflicts() —
## ✖ dplyr::filter() masks stats::filter()
## ✖ dplyr::lag()     masks stats::lag()
```

```
ggplot(data = data) +
  geom_bar(mapping = aes(x = Neighborhood )) +
  theme(text = element_text(size=8),
        axis.text.x = element_text(angle=90, vjust=0.5),
        axis.ticks.x = element_blank()) +
  ylab("Number of Fires") +
  ggtitle("June 2018 Fires in Boston, MA")
```

June 2018 Fires in Boston, MA



Scatterplot

Now, I try to make a scatterplot showing the zip codes on the x axis and the types of roads on the y axis. I tried to figure out how to make the zip codes discrete, but `discrete_scale_x` wasn't working for me.

```
ggplot(data = data, aes(x=Zip, y=Street.Type)) +  
  geom_point(mapping = aes(x=Zip, y=Street.Type)) +  
  xlab("Zip Code") +  
  ylab("Road Type")
```

