

# Crimes New

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```
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
library(ggplot2)
library(tidyverse)

## -- Attaching packages --
## v tibble  1.4.2      v purrr   0.2.5
## v tidyr   0.8.2      v stringr 1.3.1
## v readr   1.3.1      vforcats 0.3.0

## -- Conflicts --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()   masks stats::lag()

library(maps)

##
## Attaching package: 'maps'
## The following object is masked from 'package:purrr':
##   map
library(lubridate)

##
## Attaching package: 'lubridate'
## The following object is masked from 'package:base':
##   date
crime1<-read.csv("C:/Users/garim/OneDrive/Desktop/NEU/Introduction to Data Management and Processing/data/crime.csv")
crime1<-drop_na(crime1)

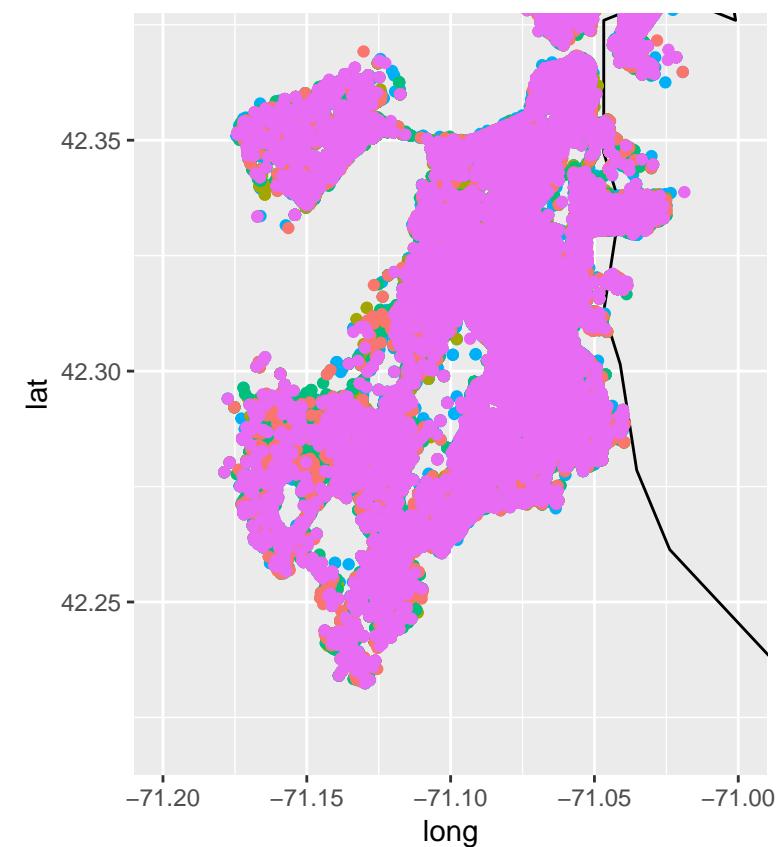
new<-crime1 %>% group_by(OFFENSE_CODE_GROUP) %>% summarise(total=n()) %>% arrange(desc(total)) %>% top_n(10)

## Selecting by total
crime1<-left_join(new,crime1)

## Joining, by = "OFFENSE_CODE_GROUP"
```

```
#locations  
corners<-map_data('state',region='massachusetts')
```

```
ggplot(corners)+geom_polygon(mapping = aes(x=long,y=lat),fill=NA,color="black")+
```

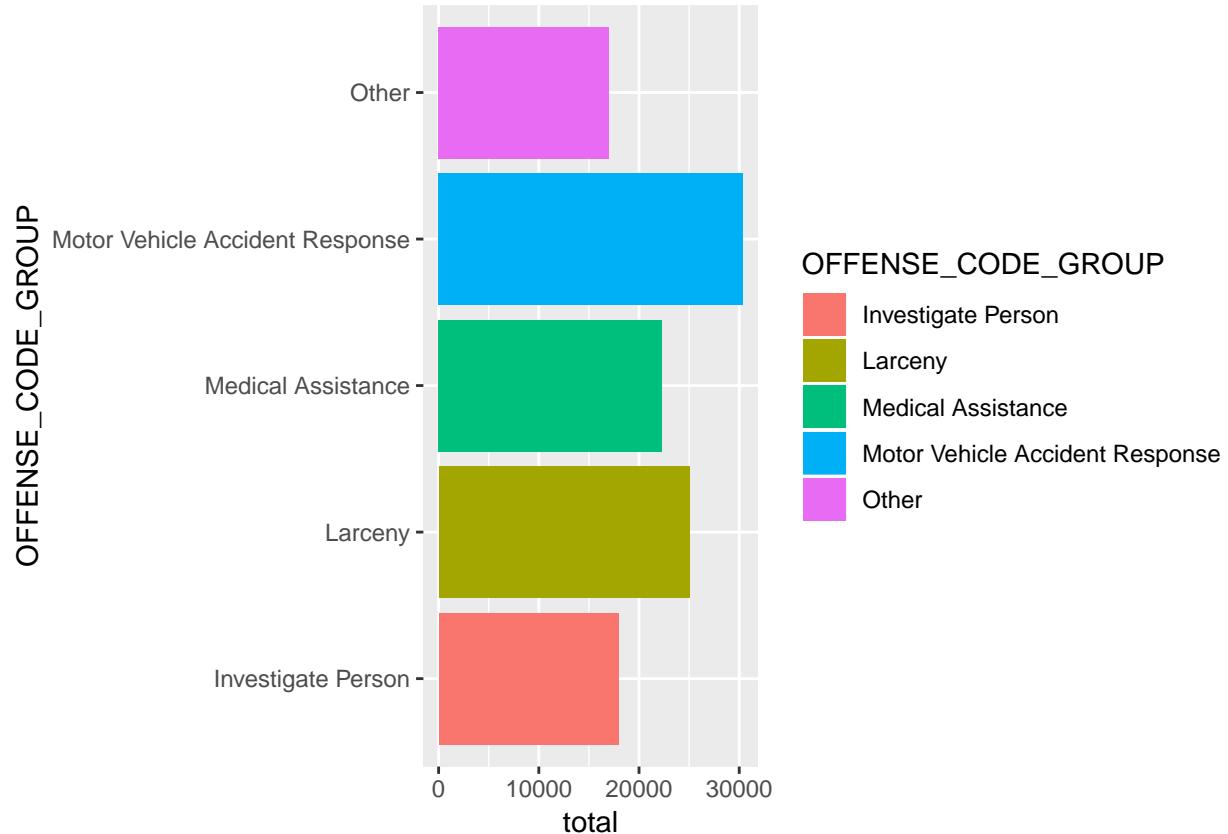


#### OFFENSE\_CODE\_GROUP

- Investigate Person
- Larceny
- Medical Assistance
- Motor Vehicle Accident Response
- Other

```
#OFFENSE_CODE_GROUP
```

```
new %>% ggplot(mapping = aes(x=OFFENSE_CODE_GROUP,y=total,fill=OFFENSE_CODE_GROUP))+geom_bar(stat = 'id
```

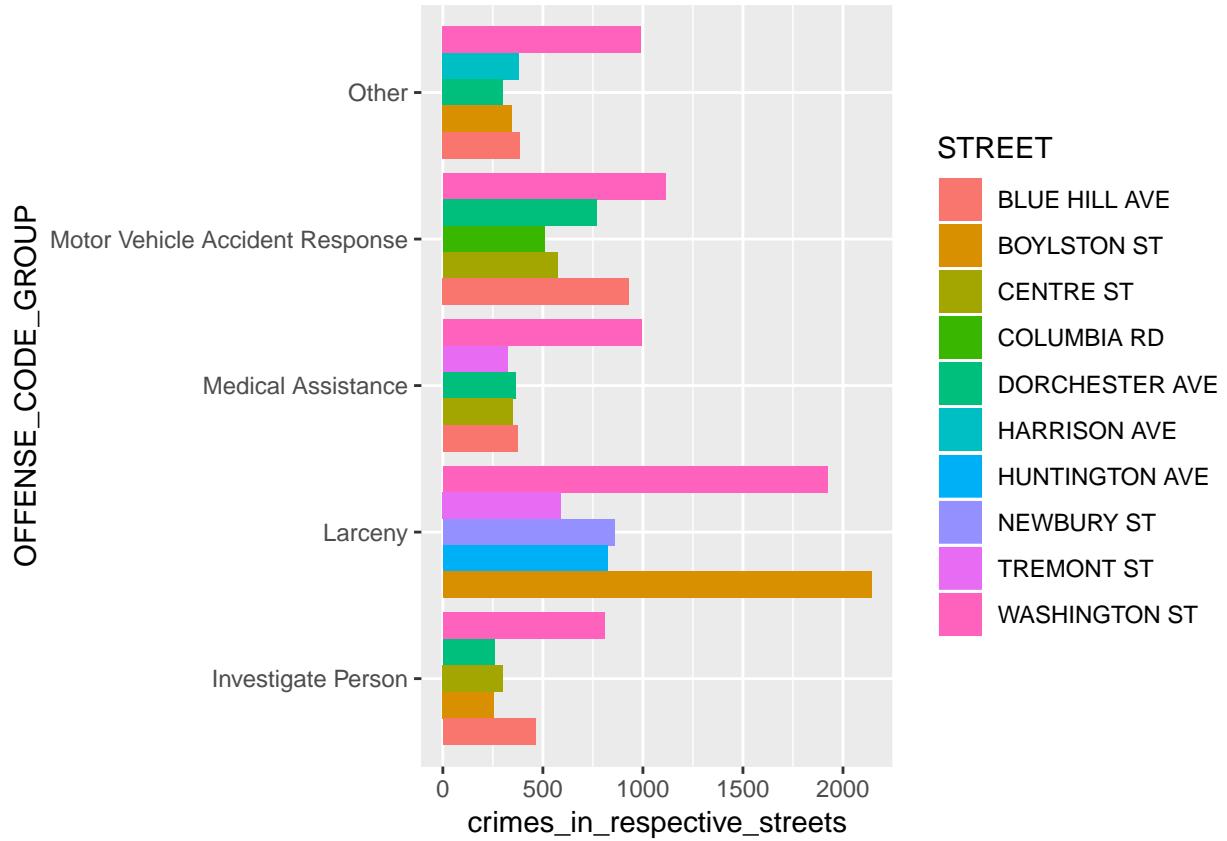


#### #CRIMES IN RESPECTIVE STREETS

```
first<-crime1%>% group_by(OFFENSE_CODE_GROUP,STREET) %>% summarise(crimes_in_respective_streets=n()) %>%

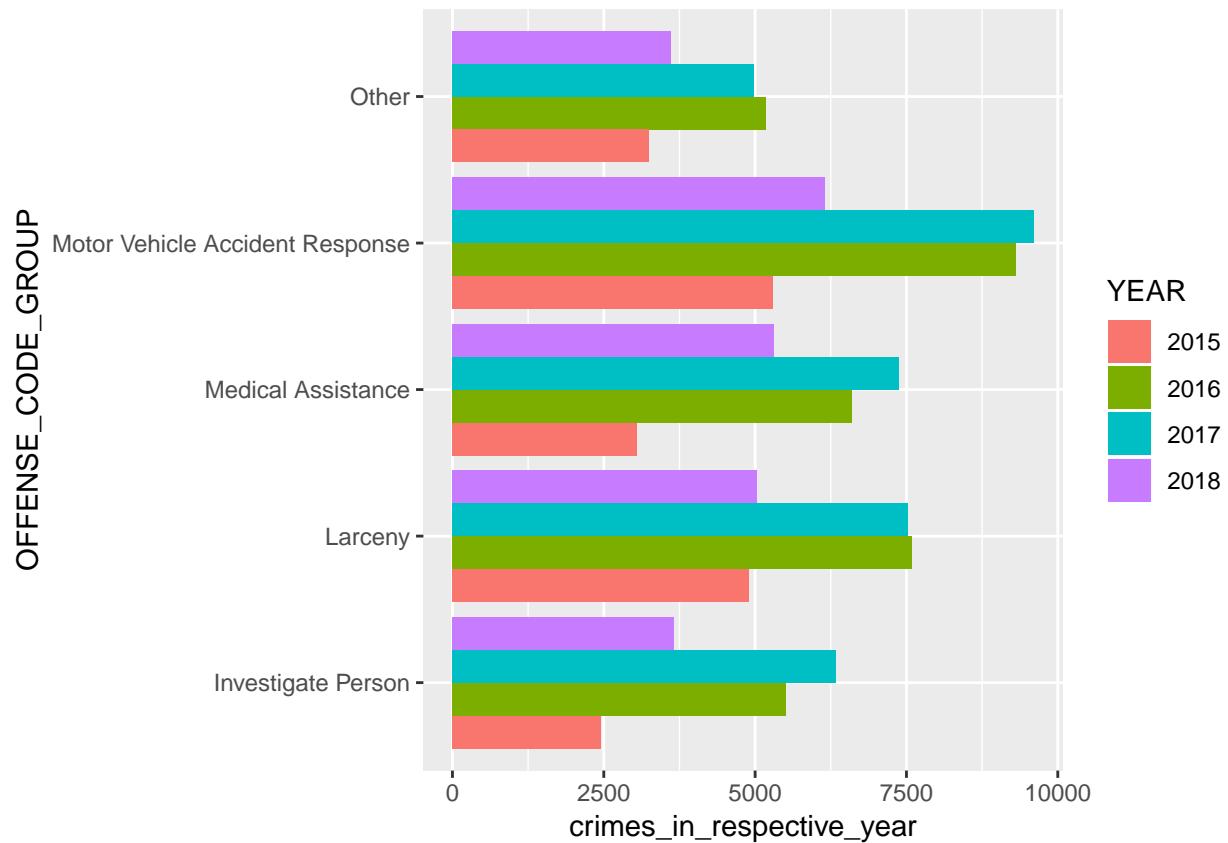
## Selecting by crimes_in_respective_streets
left_join(first,new) %>% ggplot(mapping = aes(x=OFFENSE_CODE_GROUP,y=crimes_in_respective_streets,fill=
```

```
## Joining, by = "OFFENSE_CODE_GROUP"
```



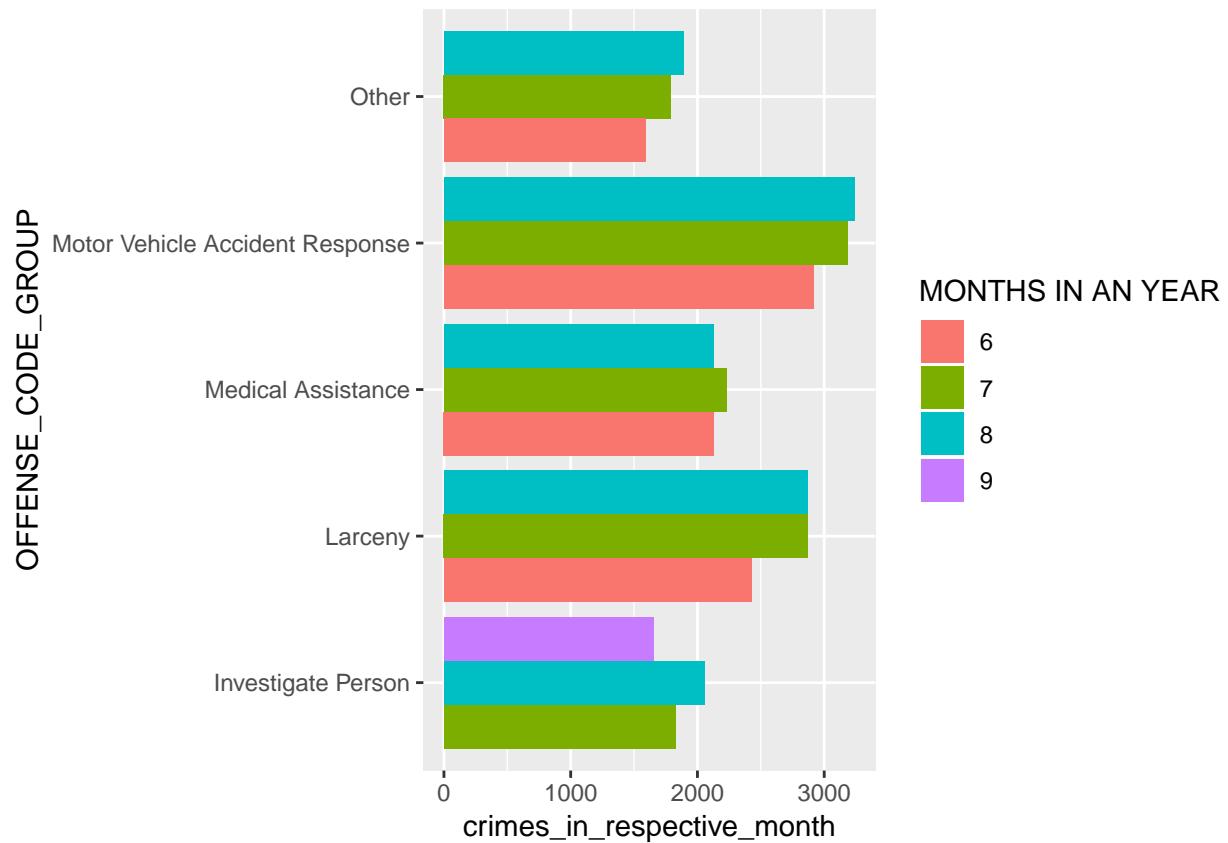
```
#CRIMES IN RESPECTIVE YEAR
second<-crime1%>% group_by(OFFENSE_CODE_GROUP, YEAR) %>% summarise(crimes_in_respective_year=n()) %>% arrange(YEAR)

## Selecting by crimes_in_respective_year
left_join(second,new) %>% ggplot(mapping = aes(x=OFFENSE_CODE_GROUP,y=crimes_in_respective_year,fill=as.factor(street)))
## Joining, by = "OFFENSE_CODE_GROUP"
```



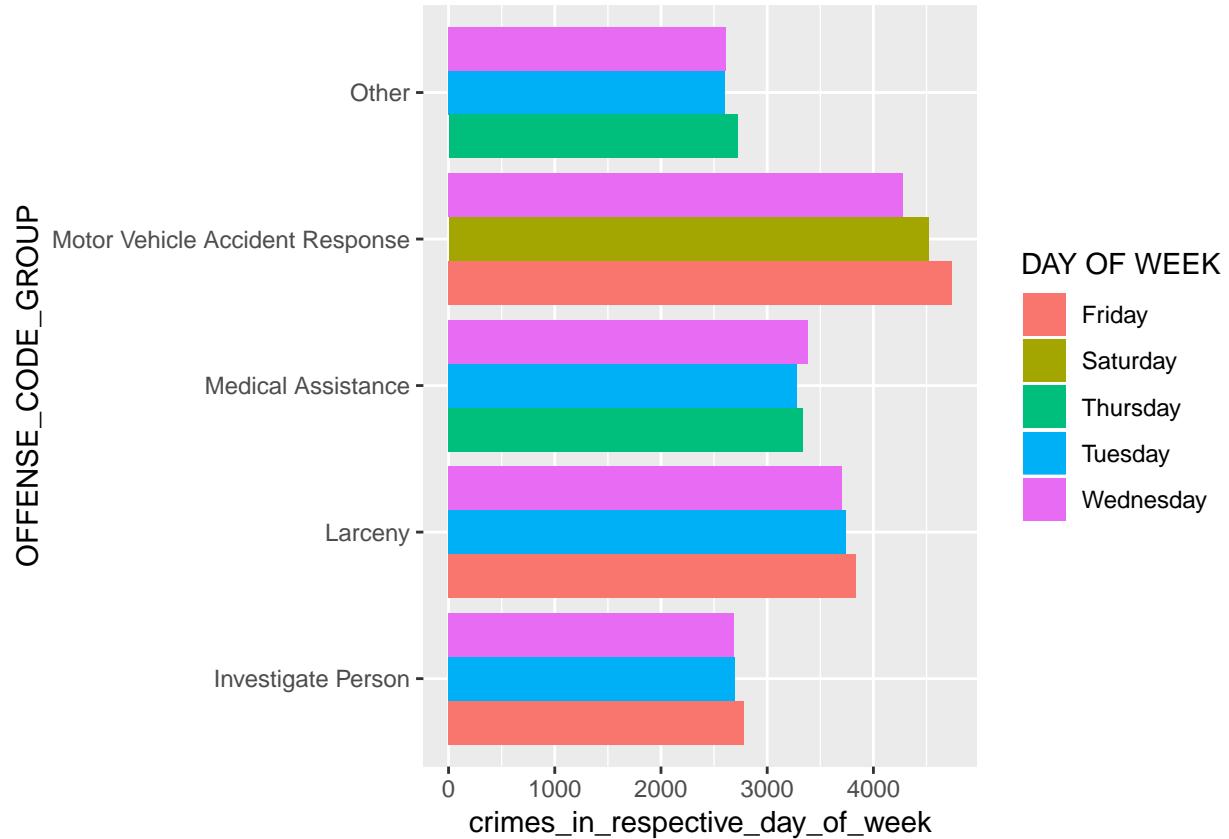
```
#CRIMES IN RESPECTIVE MONTH
```

```
third<-crime1%>% group_by(OFFENSE_CODE_GROUP,MONTH) %>% summarise(crimes_in_respective_month=n()) %>% a
## Selecting by crimes_in_respective_month
left_join(third,new) %>% ggplot(mapping = aes(x=OFFENSE_CODE_GROUP,y=crimes_in_respective_month,fill=as
## Joining, by = "OFFENSE_CODE_GROUP"
```



```
#DAY OF WEEK
fourth<-crime1%>% group_by(OFFENSE_CODE_GROUP, DAY_OF_WEEK) %>% summarise(crimes_in_respective_day_of_week= sum(crimes_in_respective_month))

## Selecting by crimes_in_respective_day_of_week
left_join(fourth,new) %>% ggplot(mapping = aes(x=OFFENSE_CODE_GROUP,y=crimes_in_respective_day_of_week,fill=DAY_OF_WEEK)) + geom_bar(stat="identity") + theme_minimal() + xlab("Offense Group") + ylab("Crimes in Respective Day of Week") + scale_fill_discrete(name="Day of Week", labels=c("Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday")) + facet_grid(~OFFENSE_CODE_GROUP)
```



```
crime1<-crime1 %>% mutate(date=substring(crime1[['OCCURRED_ON_DATE']],9,10))

#DATE IN MONTH
fifth<-crime1%>% group_by(OFFENSE_CODE_GROUP,date) %>% summarise(crimes_in_respective_date_in_month=n())

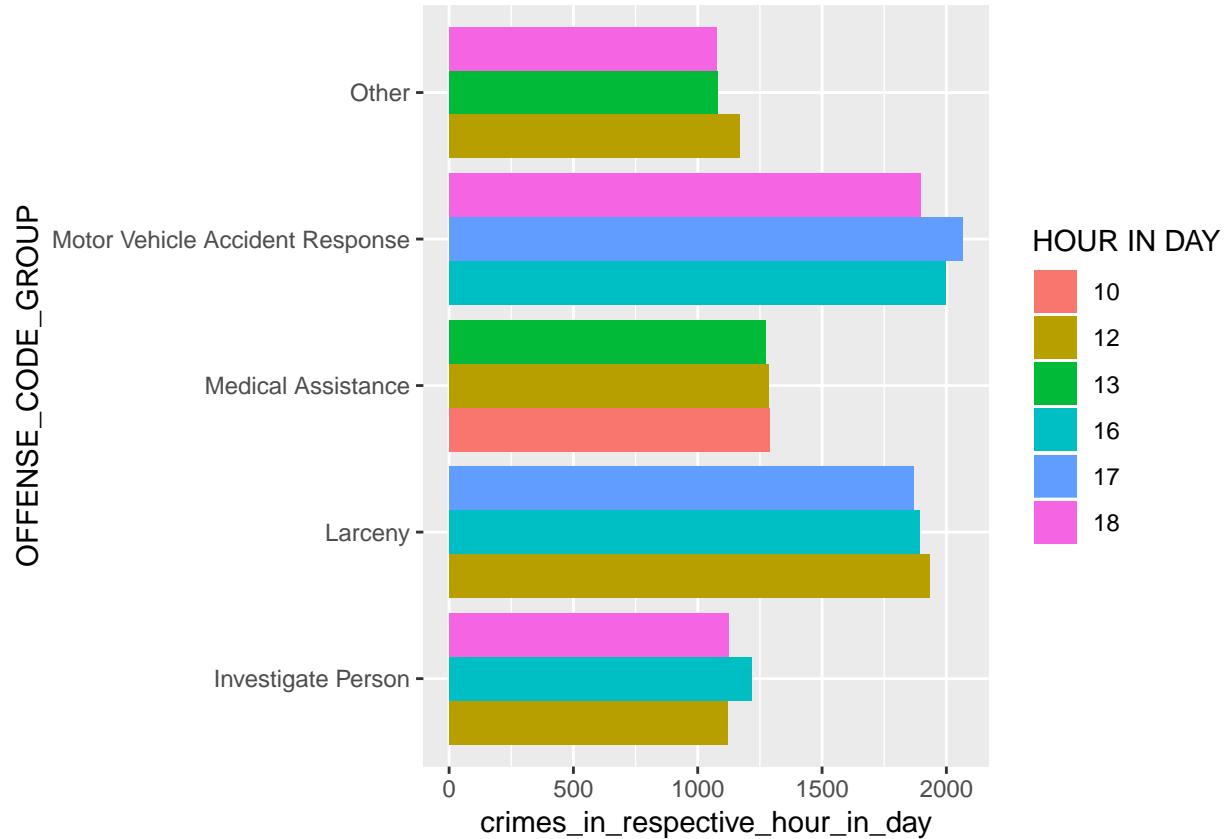
## Selecting by crimes_in_respective_date_in_month
left_join(fifth,new) %>% ggplot(mapping = aes(x=OFFENSE_CODE_GROUP,y=crimes_in_respective_date_in_month)

## Joining, by = "OFFENSE_CODE_GROUP"
```



```
#HOUR IN DAY
sixth<-crime1%>% group_by(OFFENSE_CODE_GROUP,HOUR) %>% summarise(crimes_in_respective_hour_in_day=n()) %>% select(-HOUR)

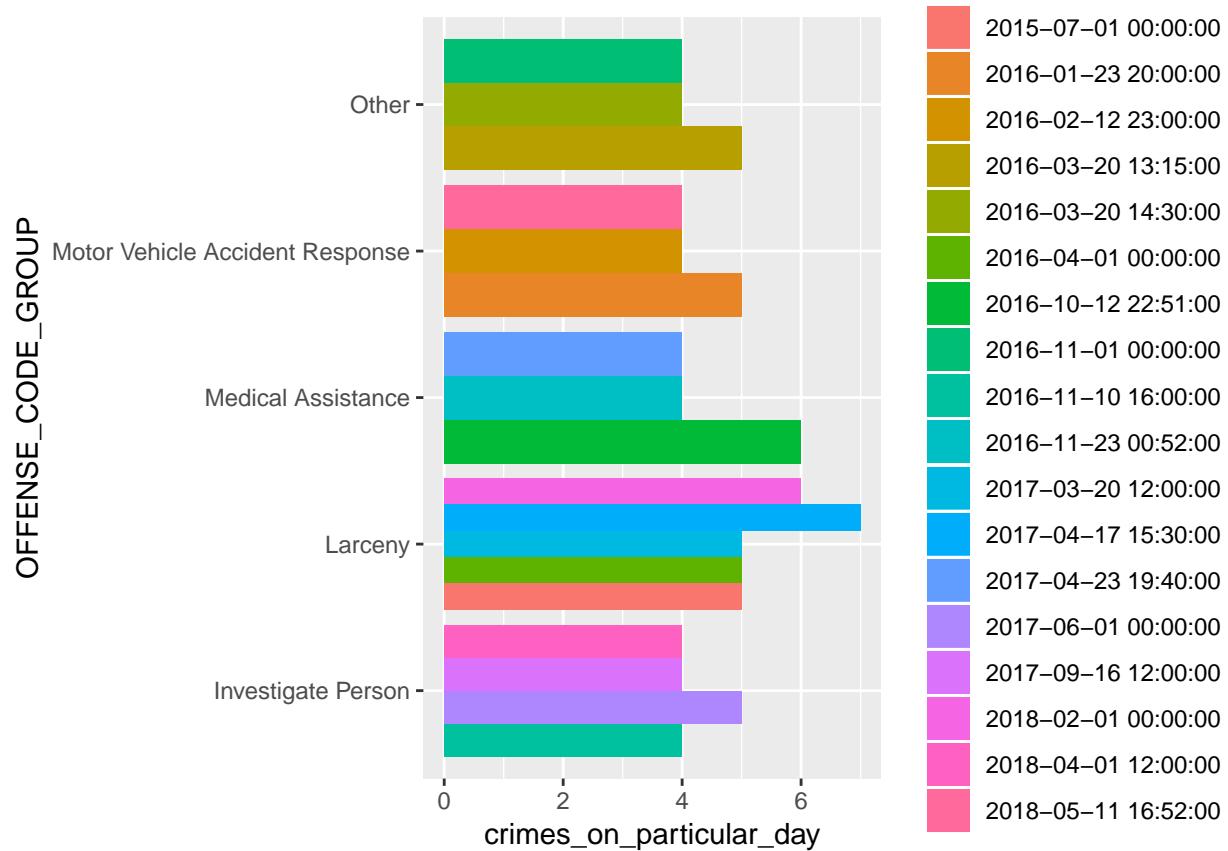
## Selecting by crimes_in_respective_hour_in_day
left_join(sixth,new) %>% ggplot(mapping = aes(x=OFFENSE_CODE_GROUP,y=crimes_in_respective_hour_in_day,freq)) + geom_bar(stat="identity") + facet_grid(~HOUR)
```



```
#ON PARTICULAR DATE

seventh<-crime1%>% group_by(OFFENSE_CODE_GROUP,OCCURRED_ON_DATE) %>% summarise(crimes_on_particular_day)

## Selecting by crimes_on_particular_day
left_join(seventh,new) %>% ggplot(mapping = aes(x=OFFENSE_CODE_GROUP,y=crimes_on_particular_day,fill=as
```



```
#REPORTING_AREA
```

```
eighth<-crime1%>% group_by(OFFENSE_CODE_GROUP,REPORTING_AREA) %>% summarise(crimes_reporting_area=n()) %>% left_join(eighth,new) %>% ggplot(mapping = aes(x=OFFENSE_CODE_GROUP,y=crimes_reporting_area,fill=as.factor(crimes_reporting_area))) + geom_bar(stat="identity") + theme_minimal() + theme(legend.title="Reporting Area", legend.position="right") + scale_fill_discrete(name="Reporting Area", labels=c("100-199","200-299","300-399","400-499","500-599","600-699","700-799","800-899","900-999")) + xlab("Offense Code Group") + ylab("Crimes Reporting Area") + ggtitle("Crimes on Particular Day by Offense Code Group and Reporting Area")
```

