Homework_Rmarkdown_wipas

Wipas

2023-12-05

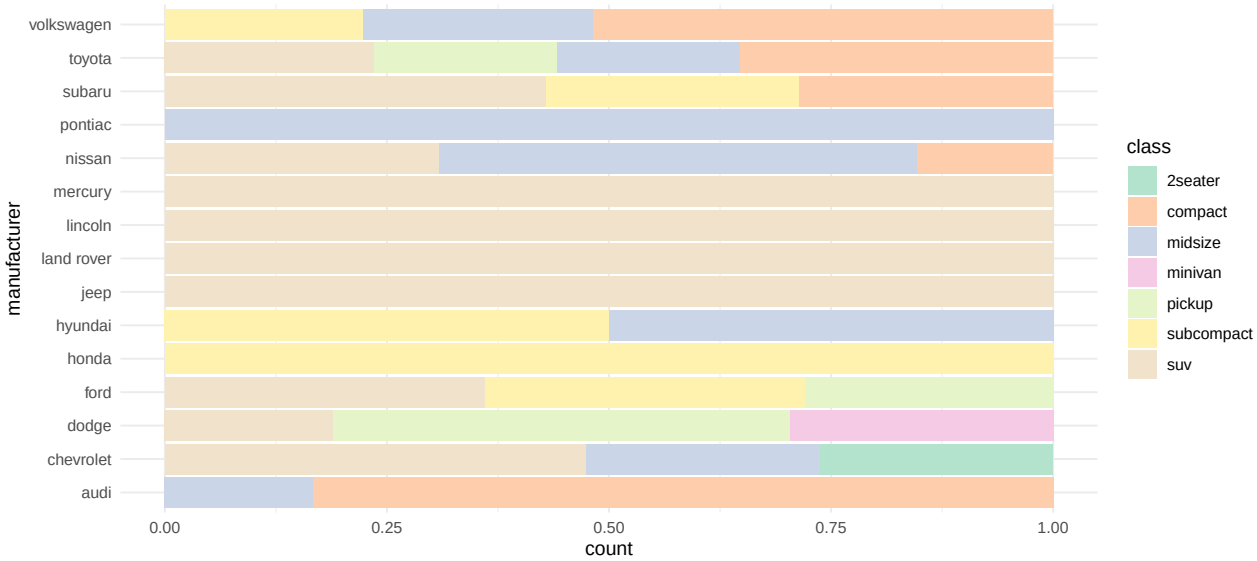
```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.4
## v forcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.4.4     v tibble    3.2.1
## v lubridate 1.9.3     v tidyr     1.3.0
## v purrr     1.0.2
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(patchwork)
```

1.How many type of cars for each manufacturer

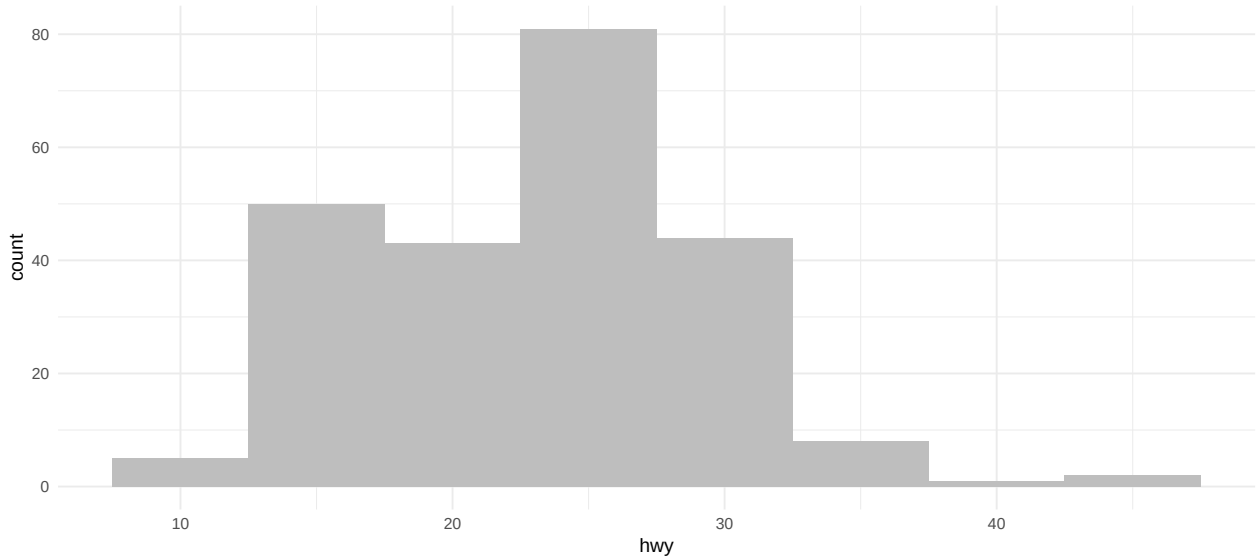
```
ggplot(mpg, aes( y=manufacturer, fill = class))+
  geom_bar(position="fill")+
theme_minimal() +
scale_fill_brewer(palette = "Pastel2")
```



2.Distribution of hwy

```
ggplot(mpg, aes(hwy))+
  geom_histogram(binwidth = 5, fill = "grey")+
```

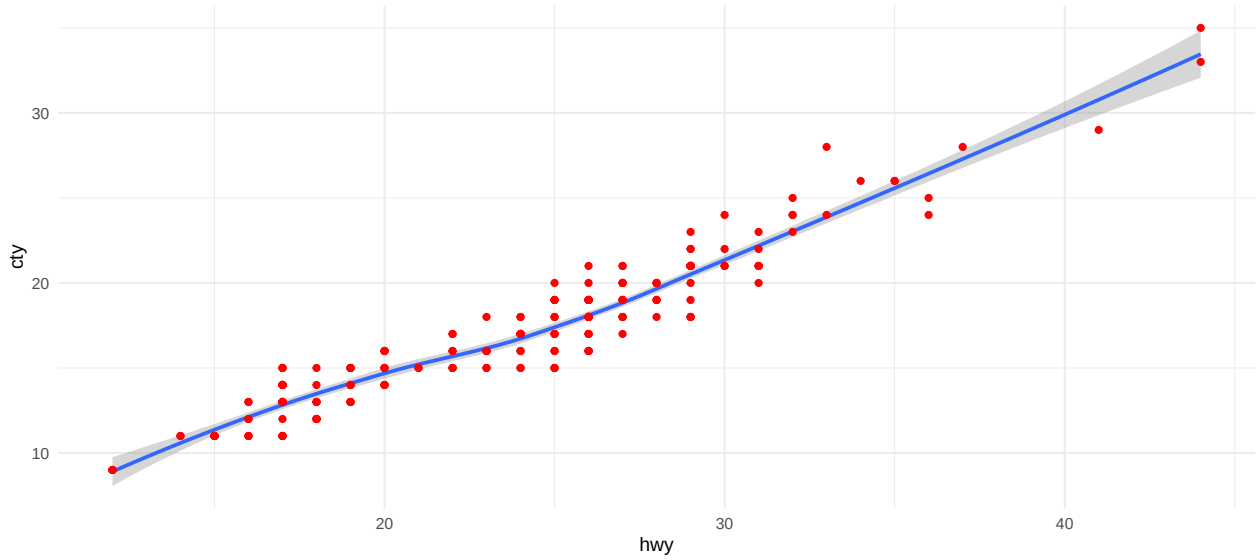
```
  theme_minimal()
```



3.relationship of hwy and cty

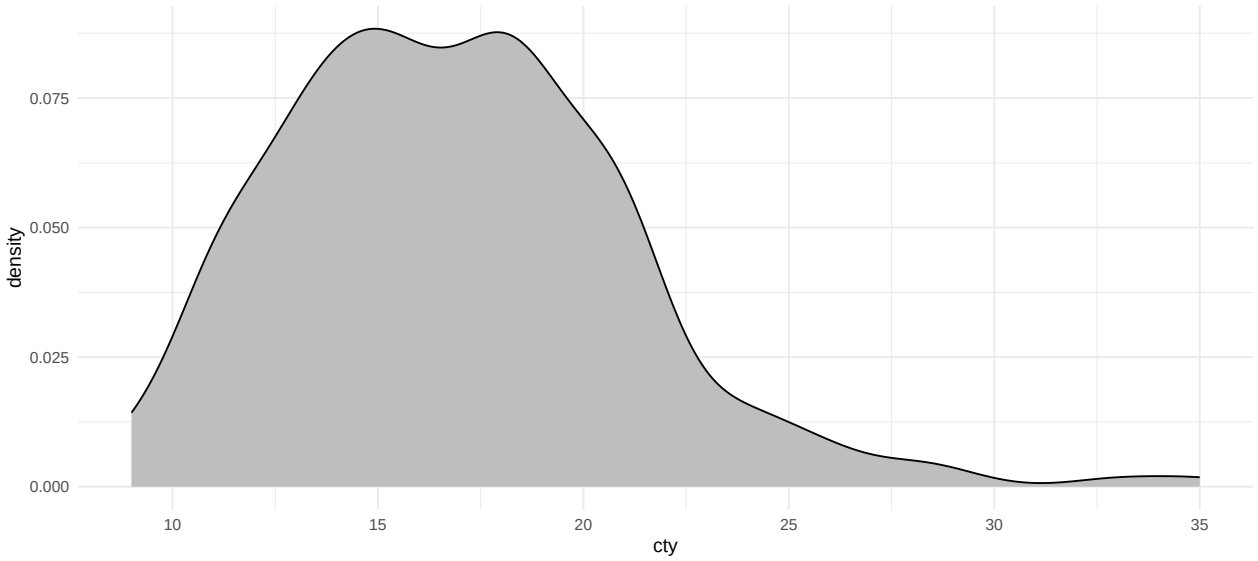
```
ggplot(mpg, aes(hwy,cty))+
  geom_smooth() +
  geom_point(color = "red")+
  theme_minimal()
```

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```



4.Distribution of cty

```
ggplot(mpg, aes(cty))+
  geom_density(fill="grey")+
  theme_minimal()
```



5.Comparison of the number of cars in each year

```
brand_motor1999 <- mpg %>%
  select(manufacturer,year)%>%
  filter(year == 1999)%>%
  group_by(manufacturer,year)%>%
  summarise(n=n())
```

```
## `summarise()` has grouped output by 'manufacturer'. You can override using the
## `.groups` argument.
```

```
brand_motor1999
```

```
## # A tibble: 15 x 3
## # Groups:   manufacturer [15]
##    manufacturer  year     n
##    <chr>        <int> <int>
##  1 audi          1999     9
##  2 chevrolet     1999     7
##  3 dodge         1999    16
##  4 ford          1999    15
##  5 honda         1999     5
##  6 hyundai       1999     6
##  7 jeep          1999     2
##  8 land rover    1999     2
##  9 lincoln       1999     2
## 10 mercury       1999     2
## 11 nissan        1999     6
## 12 pontiac       1999     3
## 13 subaru        1999     6
## 14 toyota        1999    20
## 15 volkswagen    1999    16
```

```
brand_motor2008 <- mpg %>%
  select(manufacturer,year)%>%
  filter(year == 2008)%>%
  group_by(manufacturer,year)%>%
  summarise(n=n())
```

```
## `summarise()` has grouped output by 'manufacturer'. You can override using the
## `.groups` argument.
```

```
brand_motor2008
```

```
## # A tibble: 15 x 3
## # Groups:   manufacturer [15]
##    manufacturer  year     n
##    <chr>        <int> <int>
##  1 audi          2008     9
##  2 chevrolet     2008    12
##  3 dodge         2008    21
##  4 ford          2008    10
##  5 honda         2008     4
##  6 hyundai       2008     8
##  7 jeep          2008     6
##  8 land rover    2008     2
##  9 lincoln       2008     1
## 10 mercury       2008     2
## 11 nissan        2008     7
## 12 pontiac       2008     2
## 13 subaru        2008     8
## 14 toyota        2008    14
## 15 volkswagen    2008    11
```

```
p1 <- ggplot(brand_motor1999, aes(manufacturer,n))+
  geom_point(size = 5)+
  theme_minimal() +
  labs(caption = "Data from year 1999")

p2 <- ggplot(brand_motor2008, aes(manufacturer,n))+
  geom_point(size = 5,color = "grey")+
  theme_minimal()+
  labs(caption = "Data from year 2008")

p1+p2
```