DATA ANALYTICS – 4027

LAB-9

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Contents:

- **Plotting (DATAFRAME: Diamond)**
- **Histogram**
- **Pie**
- **GGPLOT**

Submitted to:

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Ex-9

Refer and practice ggplot commands

https://www.stt.msu.edu/~melfi/STT180Text/graphics-in-r-part-1-ggplot2.html

Exercises:

1. The diamonds data.frame is included in the ggplot2 package. Study the relationships between caret, price and color.
2. Draw plot that shows relation ship between price and carat

WAY 1

a1 <- ggplot(diamonds, aes(x=carat, y=price, color = clarity)) + geom_point()

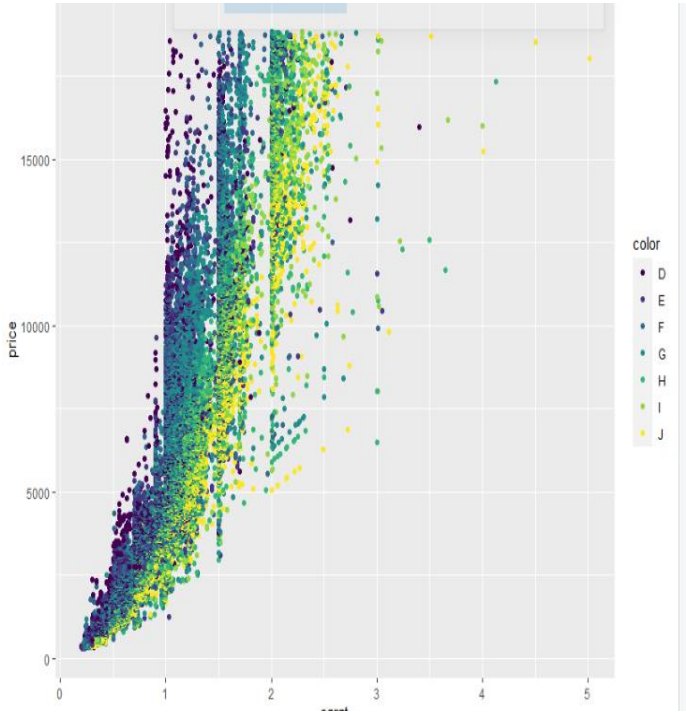
a1

WAY 2

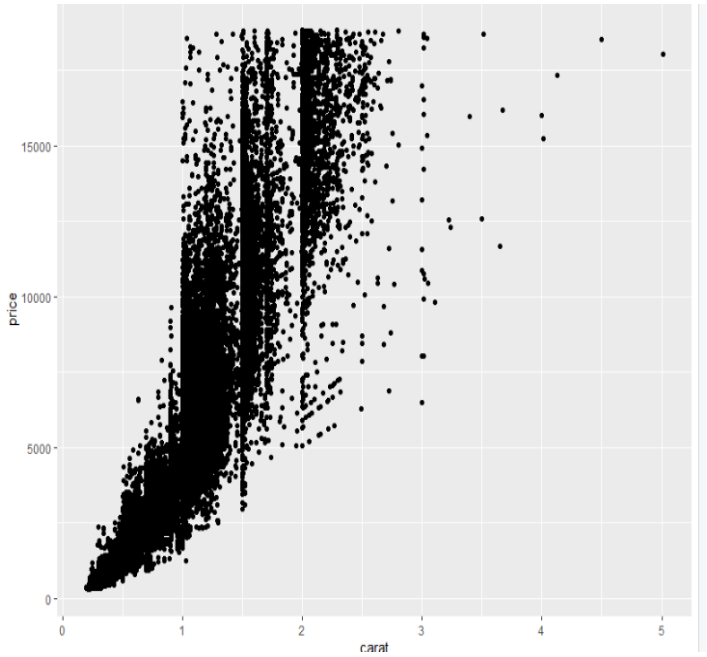
a1 <- ggplot(diamonds, aes(x=carat, y=price)) + geom_point()

a1

Clarity:



Black:



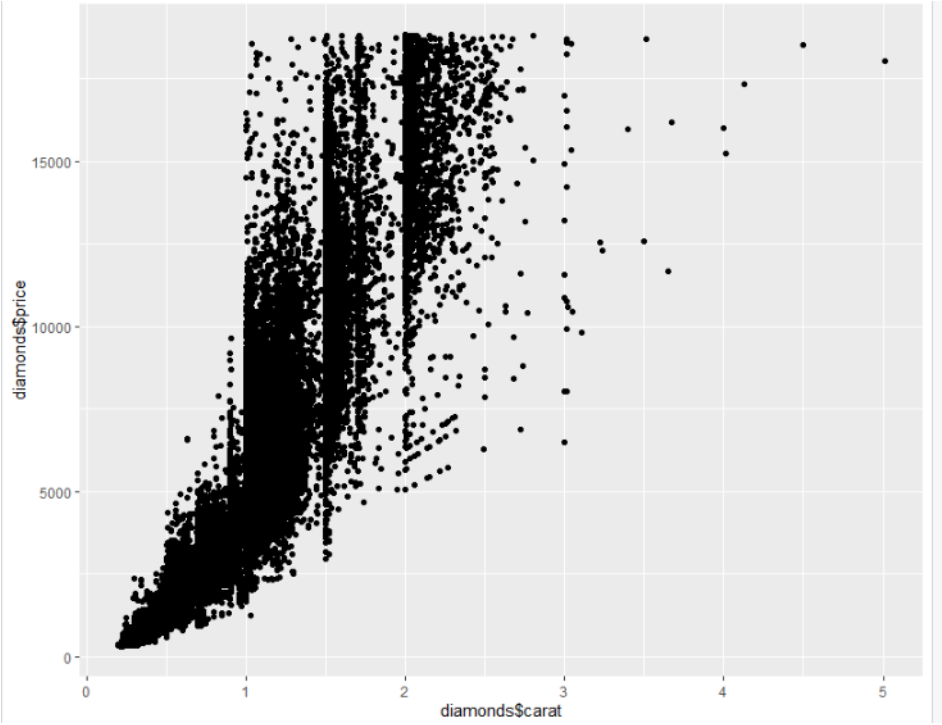
3. Show only diamonds with at least 4 carat

```
> x1 <- subset(diamonds,carat>4)
> x1
# A tibble: 5 x 10
  carat cut     color clarity depth table price     x     y     z
  <dbl> <ord>   <ord> <ord>   <dbl> <dbl> <int> <dbl> <dbl> <dbl>
1  4.01 Premium I     I1       61    61 15223  10.1 10.1   6.17
2  4.01 Premium J     I1       62.5  62 15223  10.0  9.94  6.24
3  4.13 Fair    H     I1       64.8  61 17329  10    9.85  6.43
4  5.01 Fair    J     I1       65.5  59 18018  10.7 10.5   6.98
5  4.5  Fair    J     I1       65.8  58 18531  10.2 10.2   6.72
> 
```

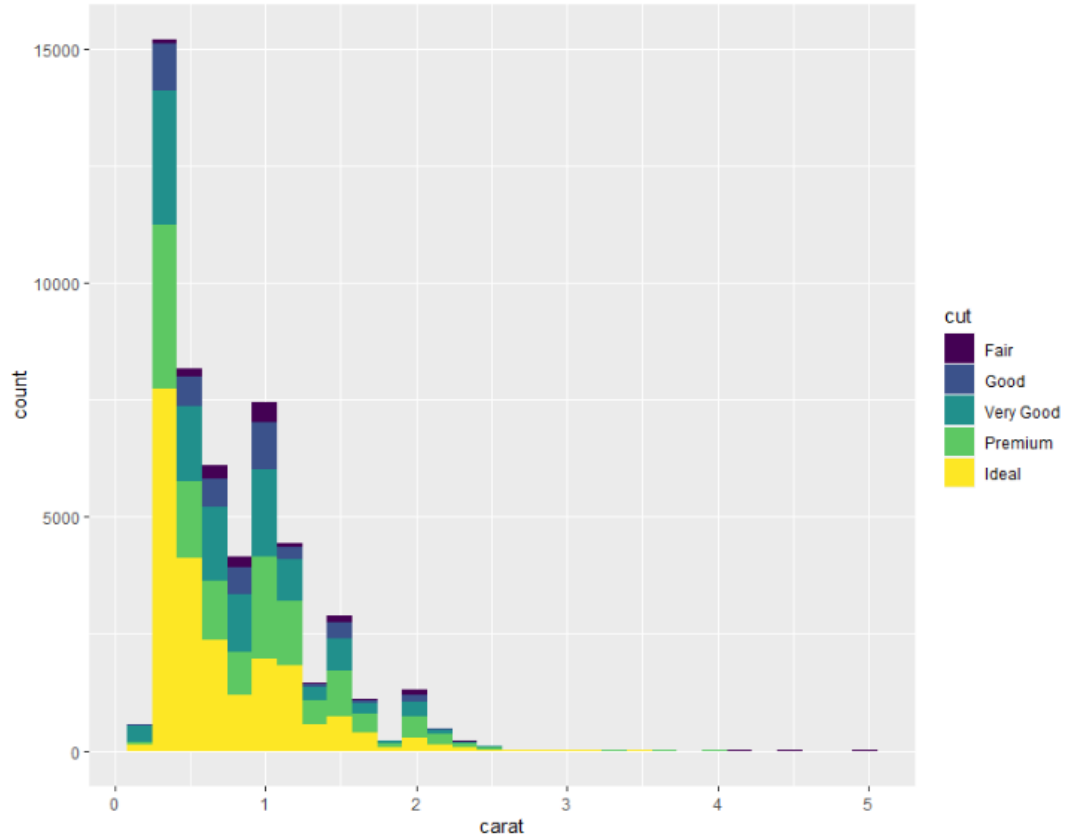
4. Convert this into a jitter plot

x1 <- ggplot(diamonds,aes(x=price,y=carat,color = cut))+ geom_jitter()

5. Switch to qplot
qplot(diamonds$carat,diamonds$price)

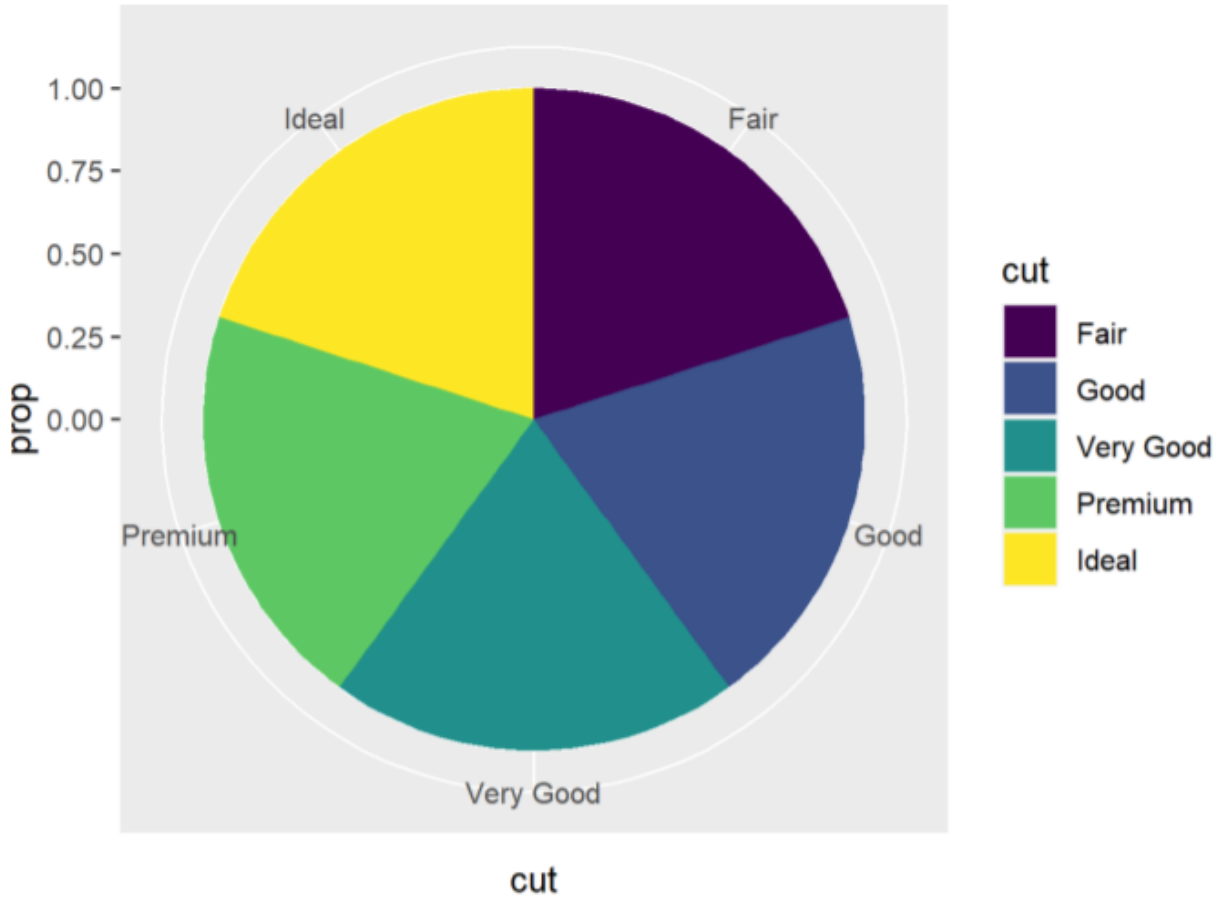


6. Draw a Histogram by cut
ggplot(diamonds,aes(x=carat, fill = cut)) + geom_histogram()



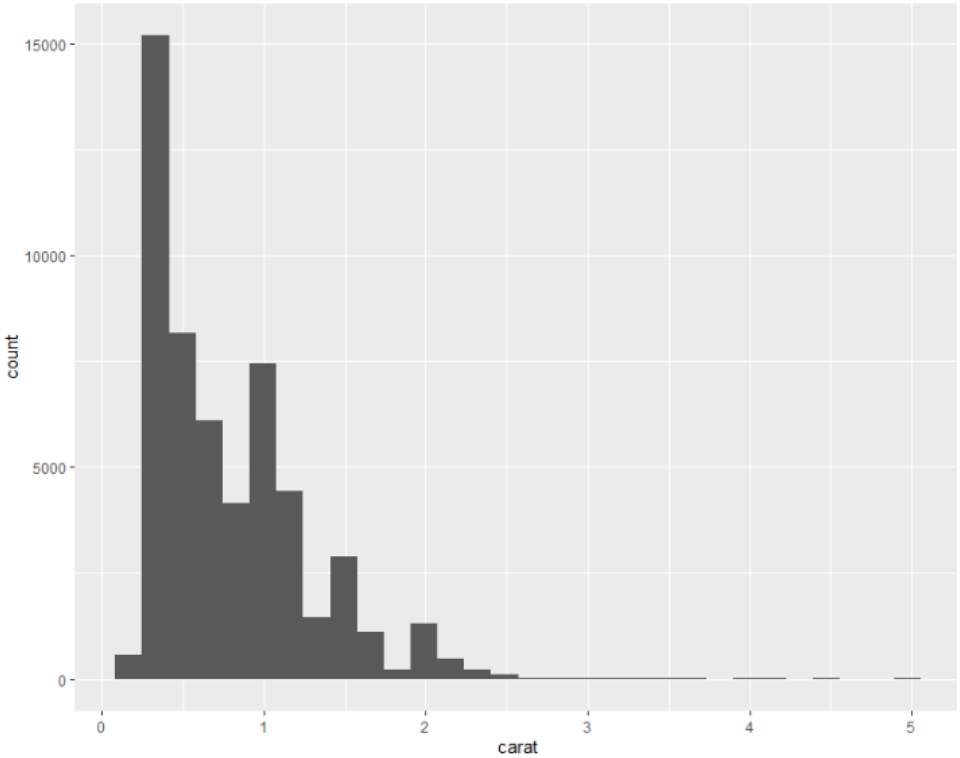
7. Draw a piechart

   ggplot(data = diamonds,mapping = aes(x=carat,y=..prop..,fill=cut))+
   geom_bar(width = 1)+coord_polar(theta = "x")



8. Create a histogram of "carat"

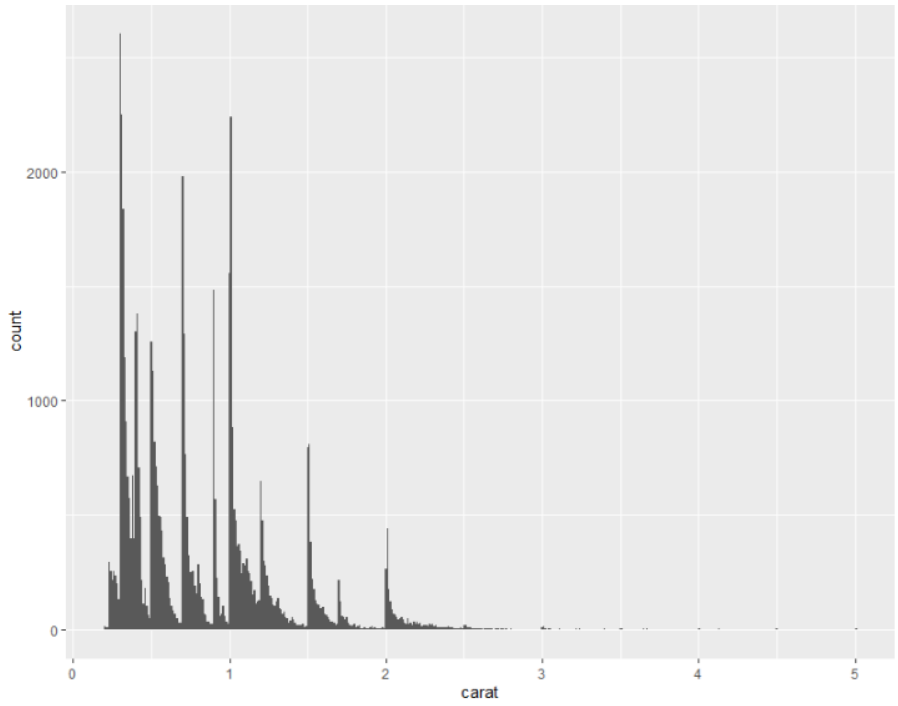
   hist(diamonds$carat)



9. Set bin width of Histogram to 0.01

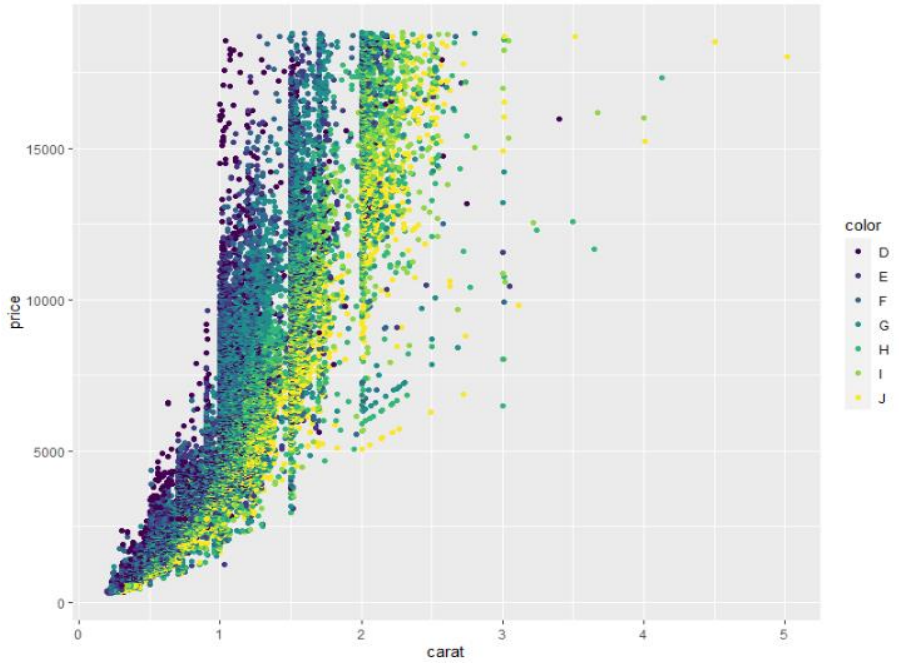
ggplot(diamonds)+

geom_histogram(mapping = aes(x = carat),binwidth = 0.01)



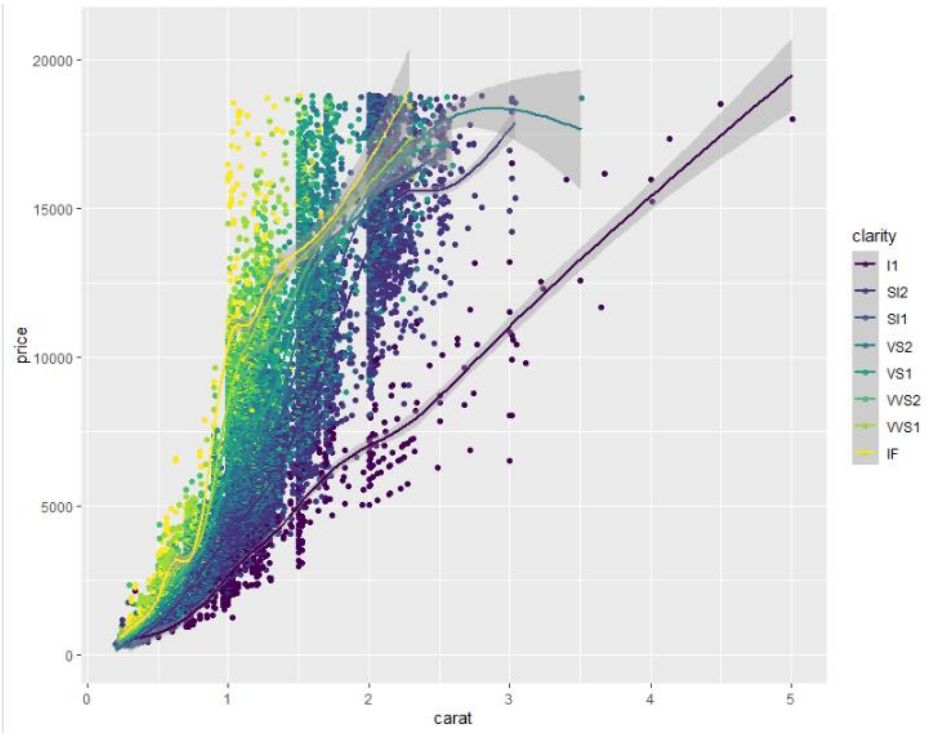
10. Make a scatterplot: carat vs price, set color

ggplot(diamonds, aes(x=carat, y=price, color=color)) + geom_point()

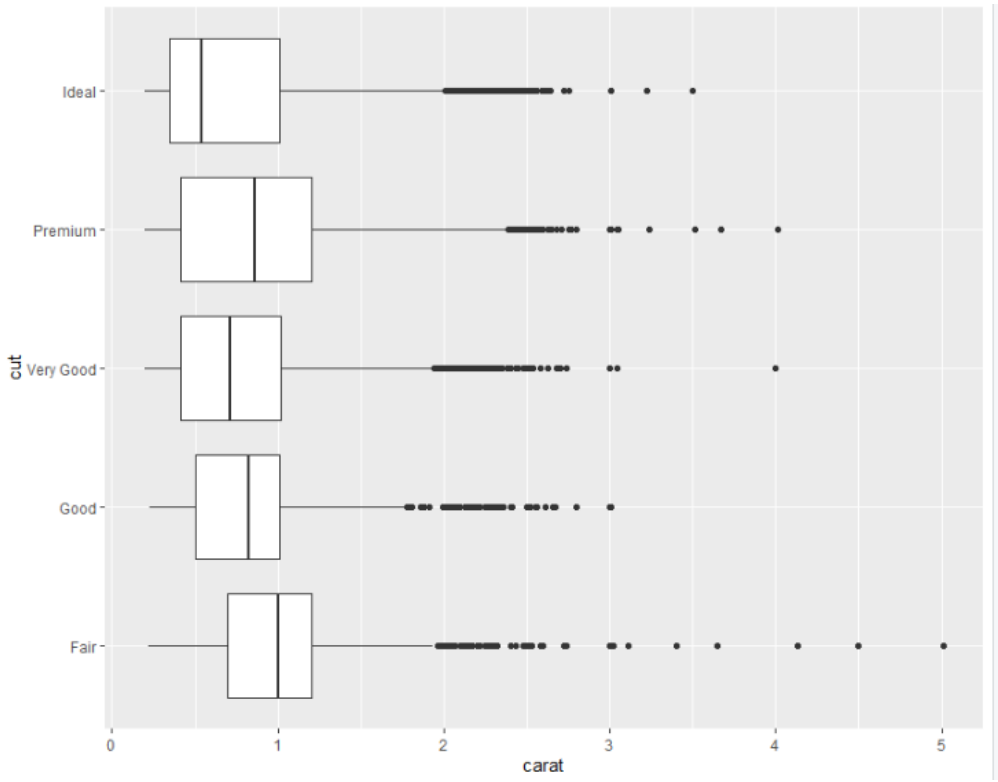


11. Make a scatterplot: carat vs price, set the color to clarity. Also add trendline to the plot

ggplot(diamonds, aes(x=carat, y=price, color =clarity)) + geom_point() + geom_smooth()



12. Show carat vs cut, make a boxplot


Ideal
Premium
Very Good
Good
Fair
cut
0
1
2
3
4
5
carat