HW1_zhengzhi

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2019.9.2

P2

partA

I want to get skills of a good swimmer and a burger eater out of this class. List: tidy output, keras, burgers.

partB

Three density funtions: pmf of poisson distribution:

$$p(k) = \frac{\lambda^k e^{-\lambda}}{k!} \tag{1}$$

pdf of normal standard distribution:

$$f(x) = \frac{1}{\sqrt{2\pi}} e^{-\frac{x^2}{2}} \tag{2}$$

pdf of uniform distribution:

$$f(x) = \begin{cases} \frac{1}{a-b}, & \text{for } a \leq x \leq b \\ 0, & \text{otherwise} \end{cases} \tag{3}$$

P3

About Rule 1, for every result, it might be hard to track espicially when a group of people is working together. Because everyone has its own style of programming, and they might not commit some result that they don't consider important or they could be lazy. Rule 2 might also create troubles for me because I am not familiar with UNIX, I will need a co-worker from CS department.

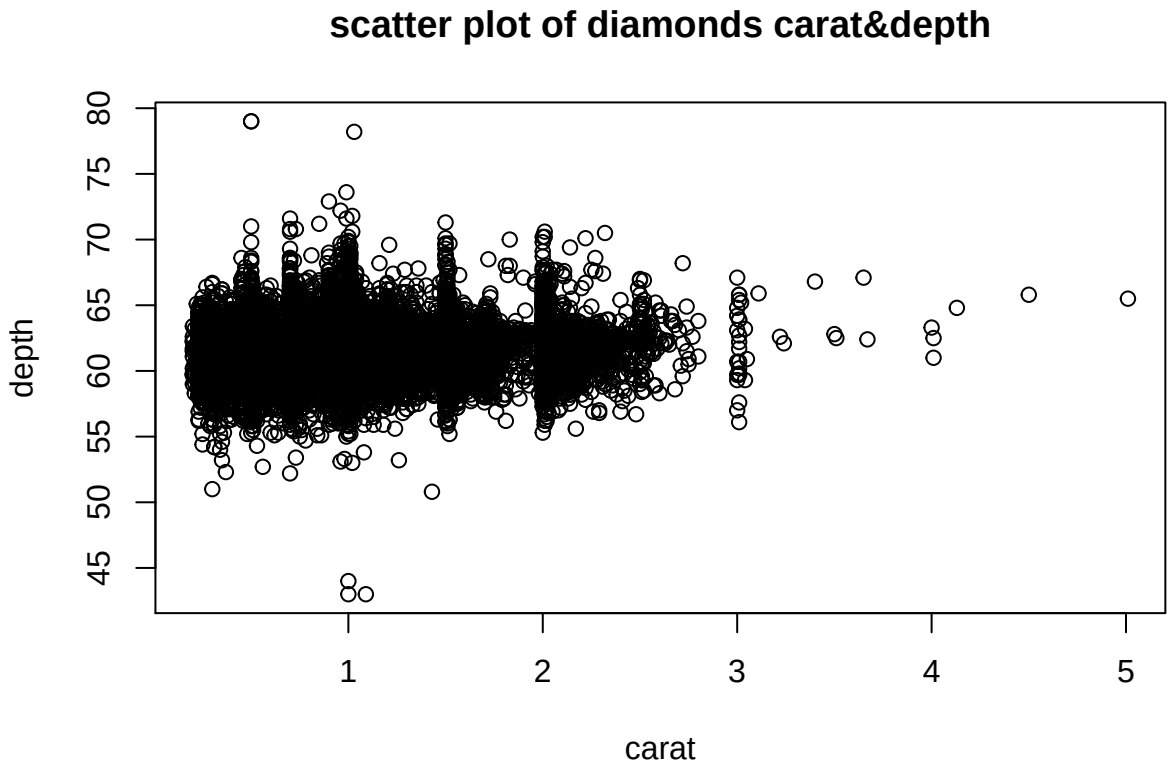
Issues I found when reading the article rules:
Rule 1, sufficient details, clear step statement
Rule 2, minimize manual procedure
Rule 3, make sure to use same version of programs that were used originally.
Rule 4, try to keep programming evironment unchanged.
Rule 5, keep all reuslts standard, tide and clean.
Rule 7, store raw data
Rule 8, hierarchical analysis output
Rule 9, add notation to underlying results.
Rule 10, make it public to test if it is reproduciable.

P4

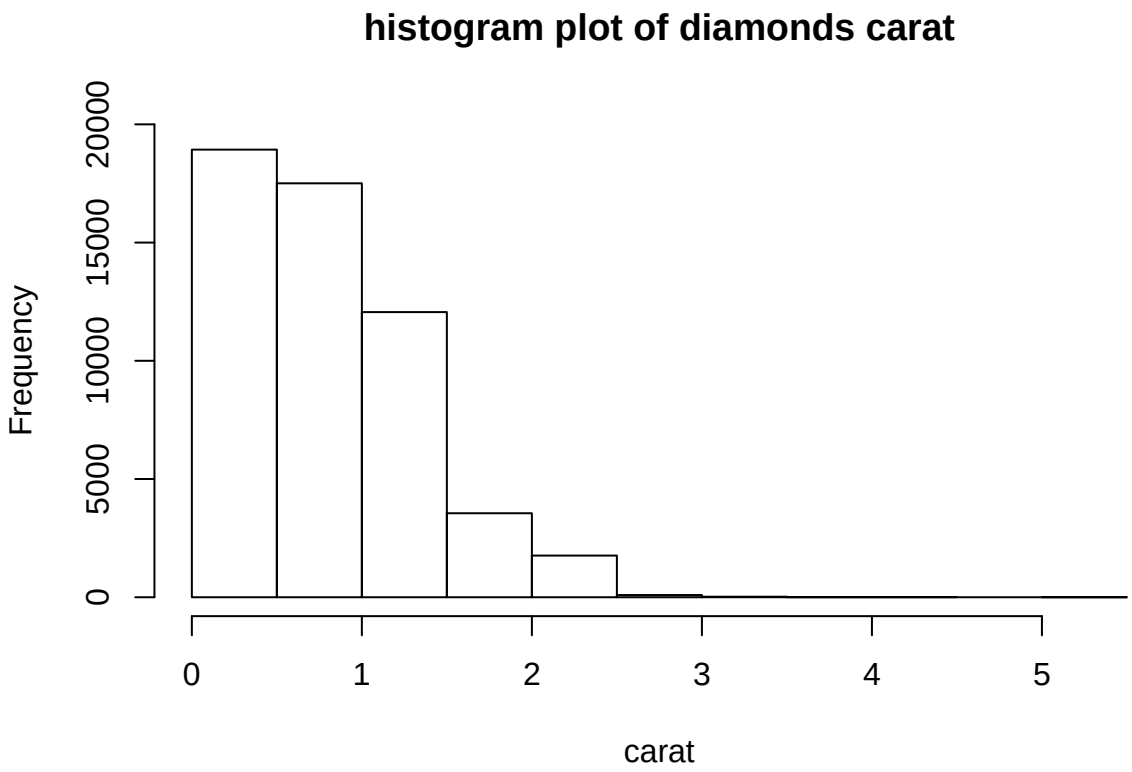
```
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 3.5.1
```

```
data(diamonds)
plot(x=diamonds$carat,y=diamonds$depth,
     main = "scatter plot of diamonds carat&depth",
     ylab = "depth",xlab = "carat")
```




```
hist(x=diamonds$carat, xlab = "carat",
     main = "histogram plot of diamonds carat",
     ylim = c(0,20000))
```


histogram plot of diamonds carat
Frequency
0
5000
10000
15000
20000
0
1
2
3
4
5
carat