

# Class2Ex

Vikas Sanil

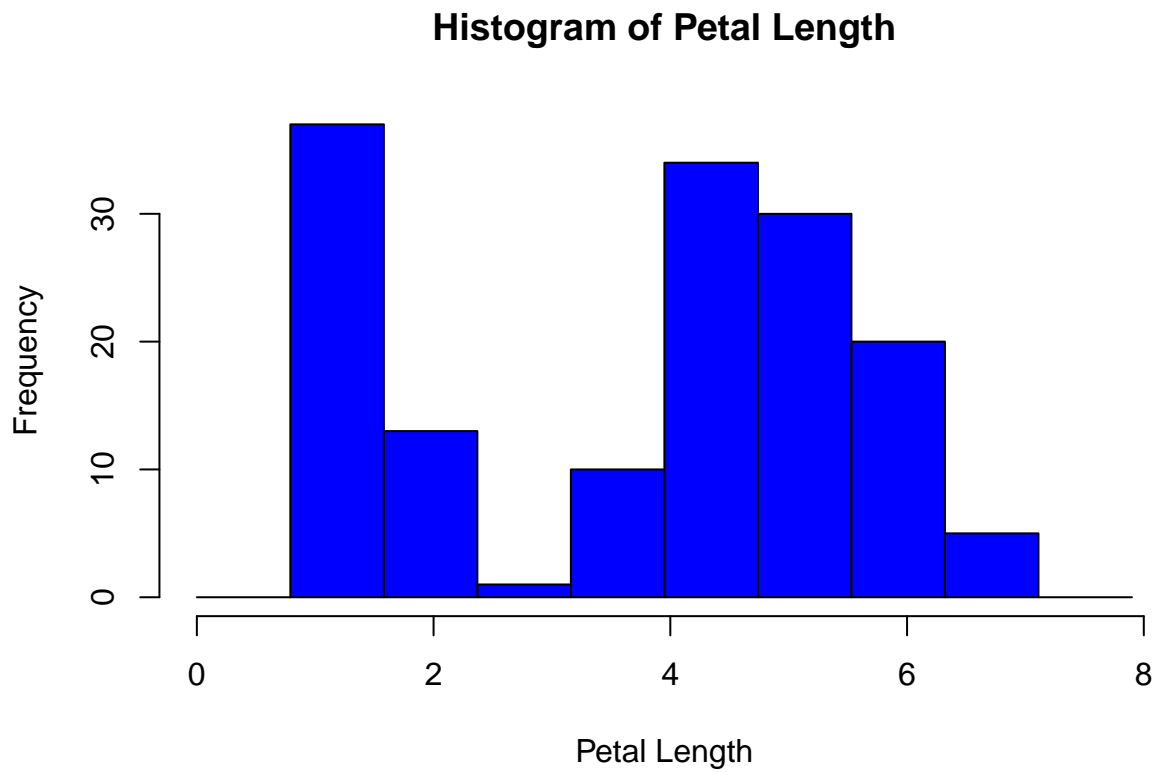
1/19/2022

```
summary(cars)
```

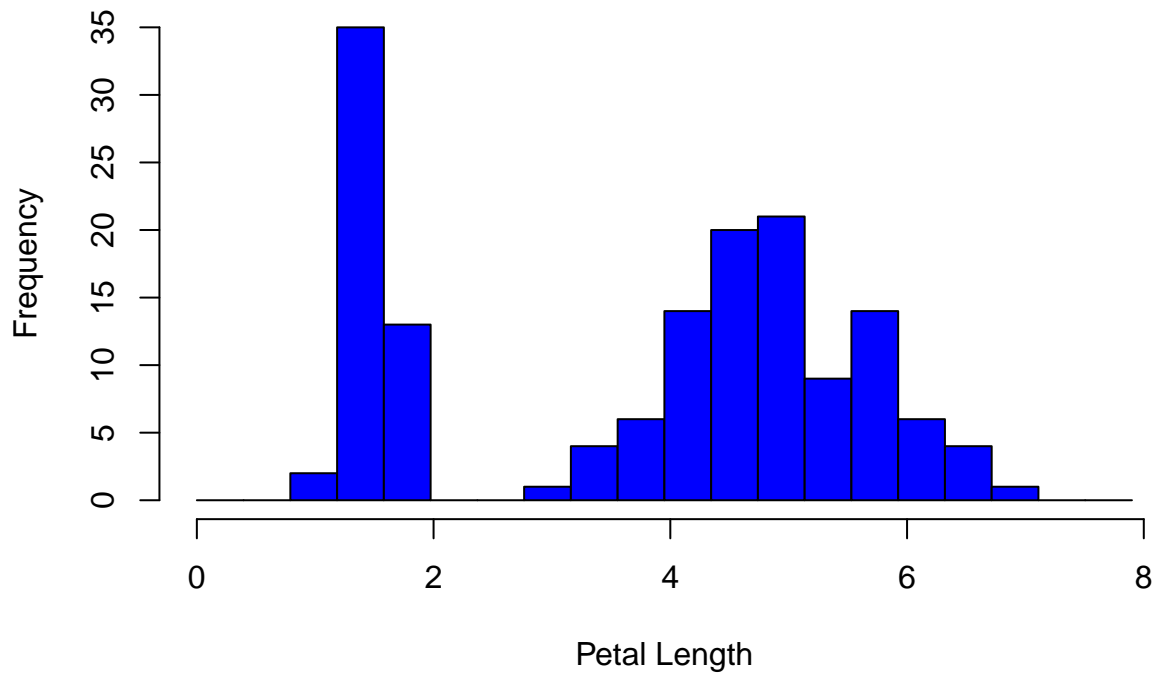
```
##      speed      dist
##  Min.   : 4.0    Min.   :  2.00
## 1st Qu.:12.0    1st Qu.: 26.00
##  Median:15.0    Median : 36.00
##  Mean   :15.4    Mean   : 42.98
## 3rd Qu.:19.0    3rd Qu.: 56.00
##  Max.   :25.0    Max.   :120.00
```

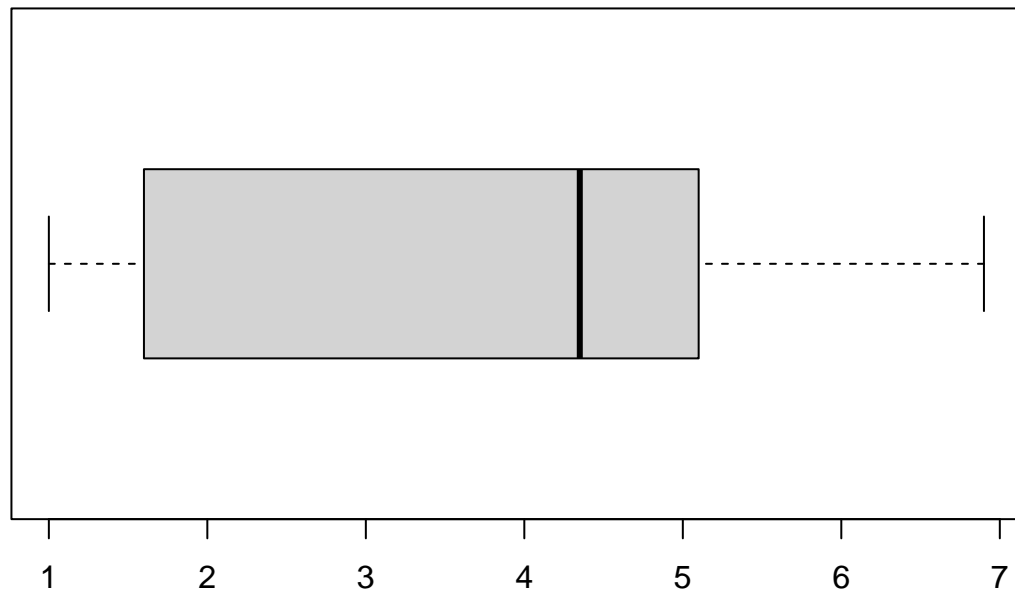
```
var(iris$Sepal.Length)
```

```
## [1] 0.6856935
```



**Histogram of Petal Length**





#Box plot

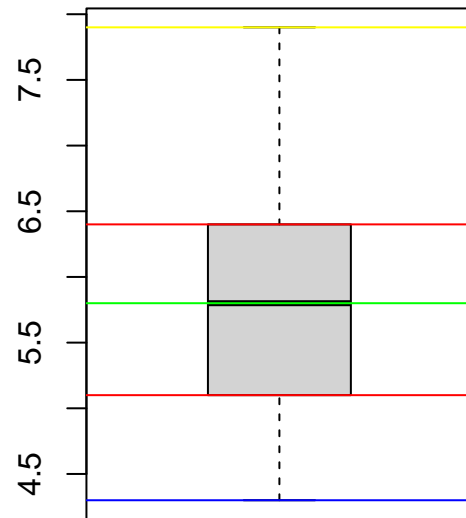
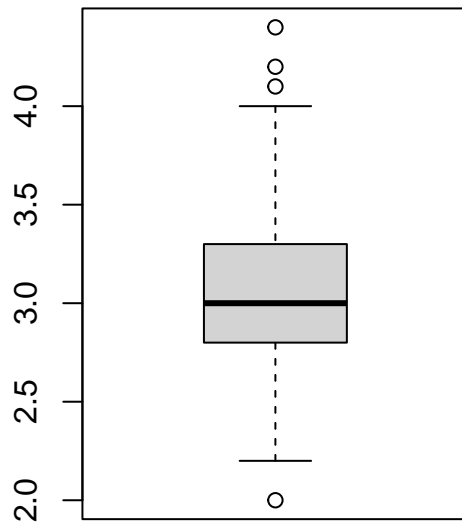
first quartile (Q1/25th Percentile): the middle number between the smallest number (not the "minimum") and the median

third quartile (Q3/75th Percentile): the middle value between the median and the highest value (not the maximum)

interquartile range (IQR): 25th to the 75th percentile.

"maximum":  $Q3 + 1.5 \cdot IQR$

"minimum":  $Q1 - 1.5 \cdot IQR$



```
carBatteries<-c(
  2.2,4.1,3.5, 4.5, 3.2, 3.7, 3.0, 2.6, 3.4, 1.6, 3.1, 3.3, 3.8, 3.1, 4.7, 3.7, 2.5,
  4.3, 3.4, 3.6, 2.9, 3.3, 3.9, 3.1, 3.3, 3.1, 3.7, 4.4, 3.2, 4.1, 1.9, 3.4, 4.7,
  3.8, 3.2, 2.6, 3.9, 3.0, 4.2, 3.5
)
max(carBatteries)
```

```
## [1] 4.7
```

```
mean(carBatteries)
```

```
## [1] 3.4125
```

```
var(carBatteries)
```

```
## [1] 0.4939423
```

```
sd(carBatteries)
```

```
## [1] 0.7028103
```

```
mean(carBatteries[carBatteries>3])
```

```
## [1] 3.683871
```

```
var(carBatteries[carBatteries>3])
```

```
## [1] 0.2393978
```

```
sd(carBatteries[carBatteries>3])
```

```
## [1] 0.489283
```

```
carBatteries[carBatteries>3]
```

```
## [1] 4.1 3.5 4.5 3.2 3.7 3.4 3.1 3.3 3.8 3.1 4.7 3.7 4.3 3.4 3.6 3.3 3.9 3.1 3.3  
## [20] 3.1 3.7 4.4 3.2 4.1 3.4 4.7 3.8 3.2 3.9 4.2 3.5
```

```
carBatteries>3
```

```
## [1] FALSE TRUE TRUE TRUE TRUE TRUE FALSE FALSE TRUE FALSE TRUE TRUE  
## [13] TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE FALSE TRUE TRUE TRUE  
## [25] TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE FALSE  
## [37] TRUE FALSE TRUE TRUE
```

```
carBatteries
```

```
## [1] 2.2 4.1 3.5 4.5 3.2 3.7 3.0 2.6 3.4 1.6 3.1 3.3 3.8 3.1 4.7 3.7 2.5 4.3 3.4  
## [20] 3.6 2.9 3.3 3.9 3.1 3.3 3.1 3.7 4.4 3.2 4.1 1.9 3.4 4.7 3.8 3.2 2.6 3.9 3.0  
## [39] 4.2 3.5
```

**Histogram of carBatteries**

