

McKibben DSC520 Ex. 6.2

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Iris Analysis

```
knitr::opts_chunk$set(echo = TRUE)
library(datasets)
new_iris <- data.frame(iris)
```

Average Sepal Length by Species

```
knitr::opts_chunk$set(echo = TRUE)
library(dplyr)
```

```
## Warning: package 'dplyr' was built under R version 4.4.1
```

```
##
```

```
## 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
```

```
head(str(new_iris))
```

```
## 'data.frame':   150 obs. of  5 variables:
```

```
## $ Sepal.Length: num  5.1 4.9 4.7 4.6 5 5.4 4.6 5 4.4 4.9 ...
```

```
## $ Sepal.Width : num  3.5 3 3.2 3.1 3.6 3.9 3.4 3.4 2.9 3.1 ...
```

```
## $ Petal.Length: num  1.4 1.4 1.3 1.5 1.4 1.7 1.4 1.5 1.4 1.5 ...
```

```
## $ Petal.Width : num  0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.2 0.2 0.1 ...
```

```
## $ Species      : Factor w/ 3 levels "setosa","versicolor",...: 1 1 1 1 1 1 1 1 1 1 ...
```

```
## NULL
```

```

species_s1 <- select(new_iris, Sepal.Length, Species)

species_1 <- slice(species_s1,1:50)
setosa_avg_sl <- mean(species_1$Sepal.Length)

species_2 <- slice(species_s1,51:100)
versicolor_avg_sl <- mean(species_2$Sepal.Length)

species_3 <- slice(species_s1,101:150)
virginica_avg_sl <- mean(species_3$Sepal.Length)

setosa_avg_sl

```

```
## [1] 5.006
```

```
versicolor_avg_sl
```

```
## [1] 5.936
```

```
virginica_avg_sl
```

```
## [1] 6.588
```

```

knitr::opts_chunk$set(echo = TRUE)
species_sw <- select(new_iris, Sepal.Width, Species)

species_1_sw <- slice(species_sw,1:50)
species_2_sw <- slice(species_sw,51:100)
species_3_sw <- slice(species_sw,101:150)

species_pl <- select(new_iris, Petal.Length, Species)

species_1_pl <- slice(species_pl,1:50)
species_2_pl <- slice(species_pl,51:100)
species_3_pl <- slice(species_pl,101:150)

species_pw <- select(new_iris, Petal.Width, Species)

species_1_pw <- slice(species_pw,1:50)
species_2_pw <- slice(species_pw,51:100)
species_3_pw <- slice(species_pw,101:150)

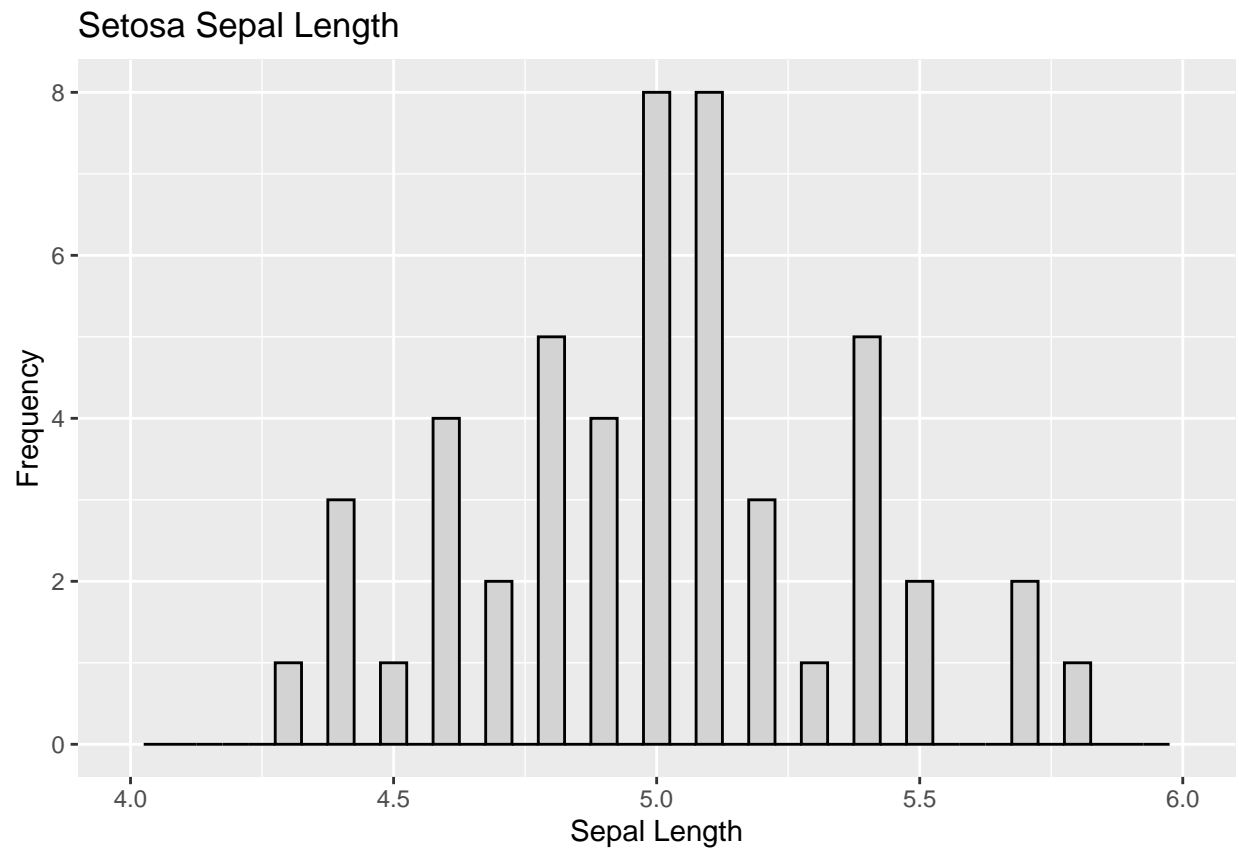
```

Visualizations

```

## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').

```



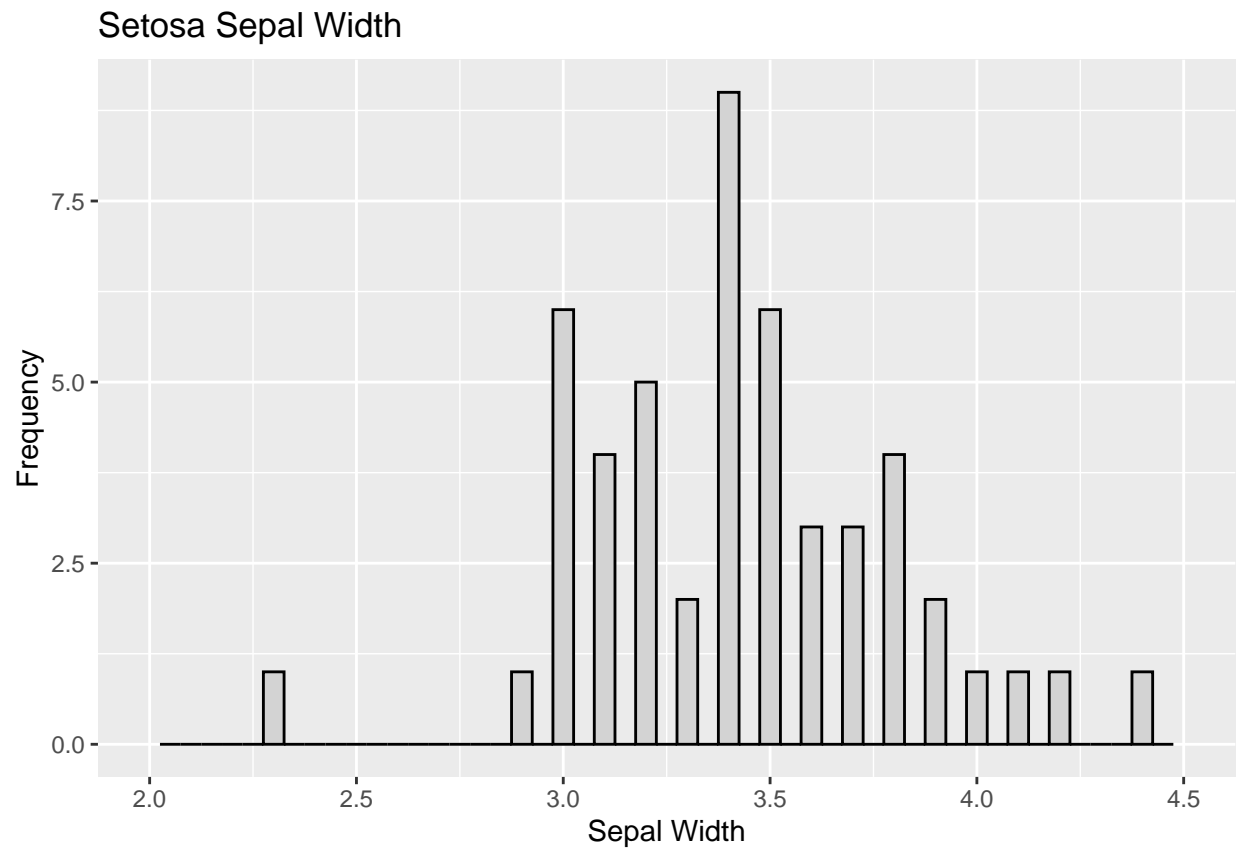
```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```



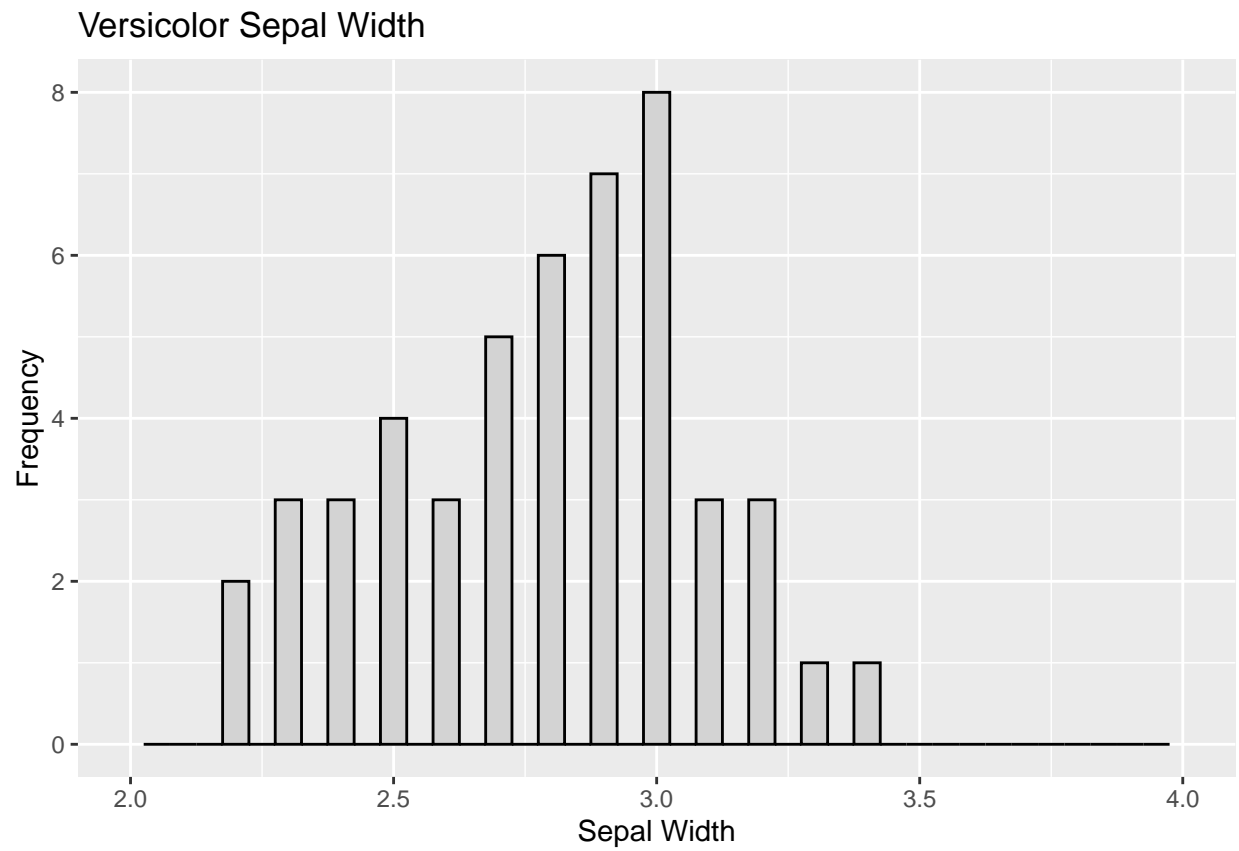
```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```



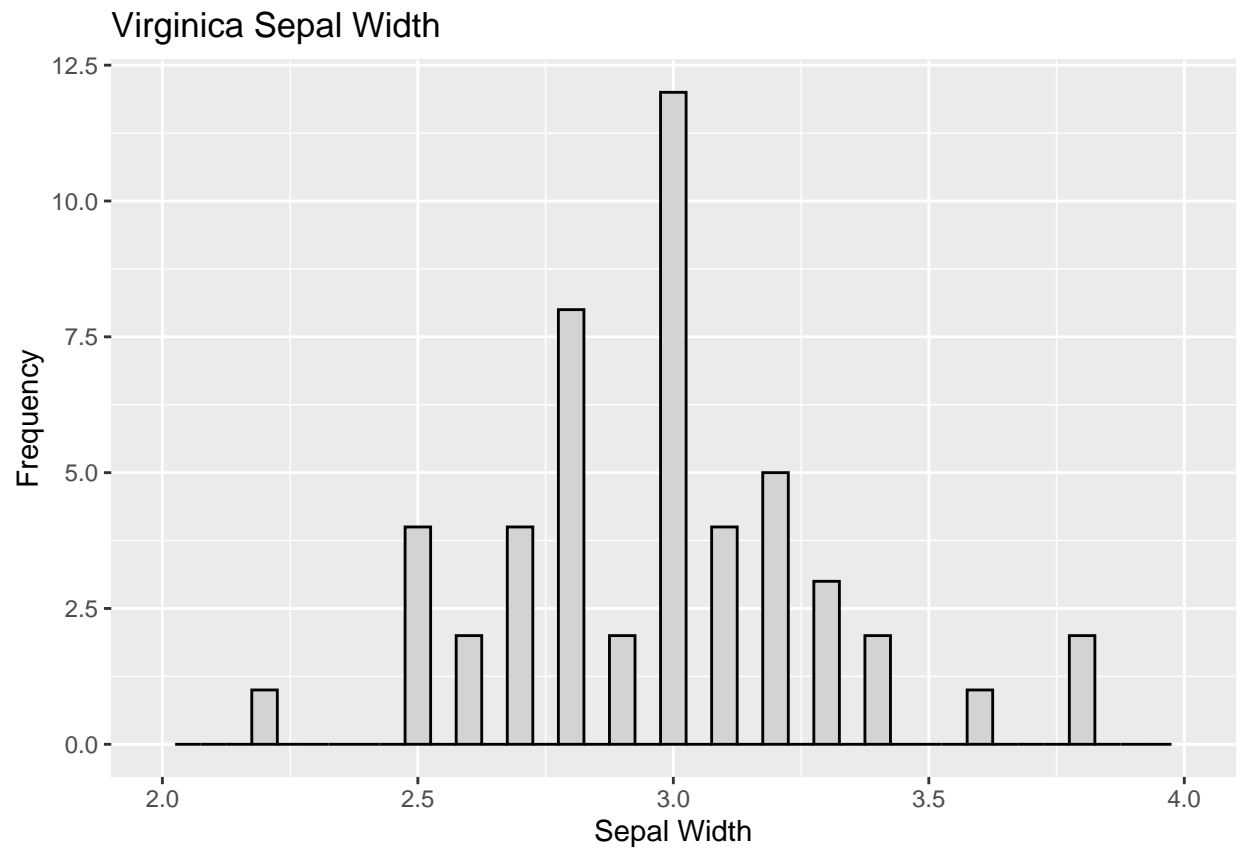
```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```



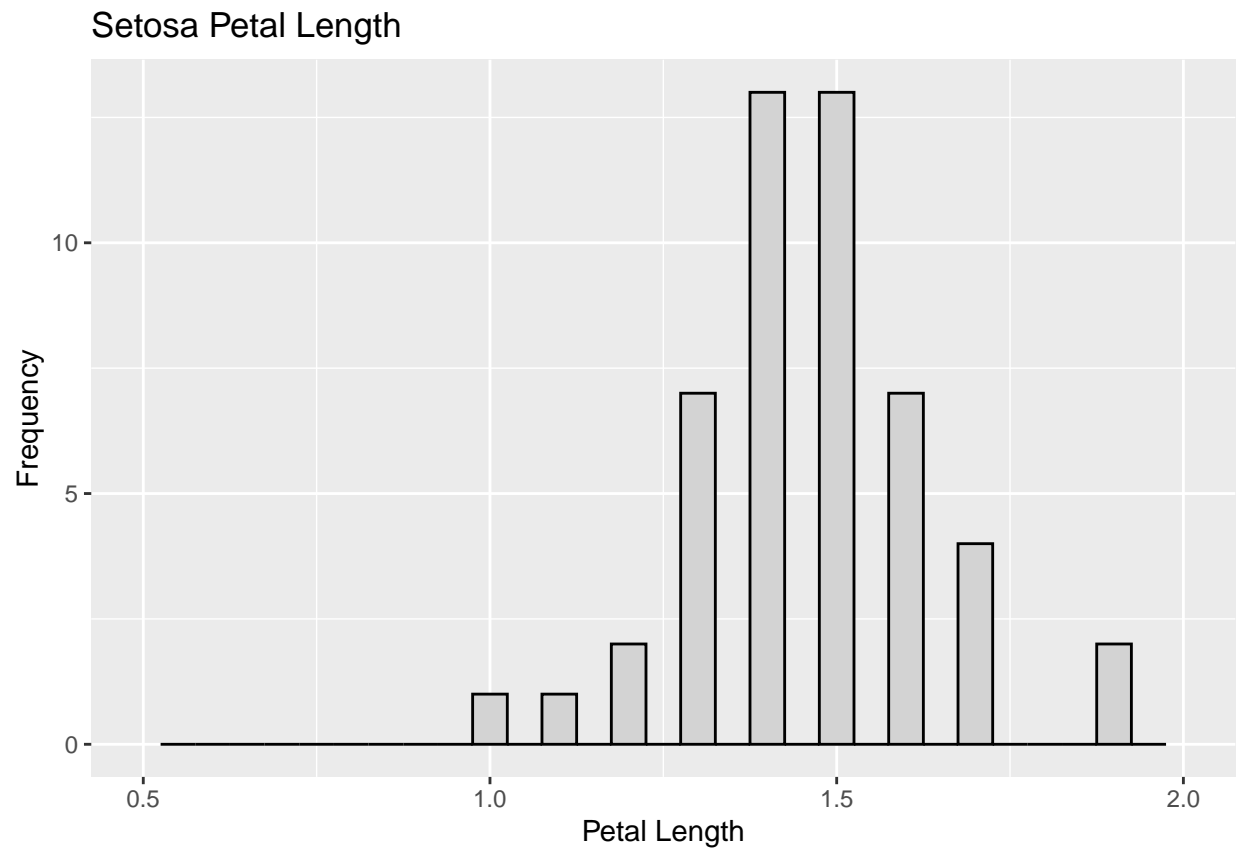
```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```



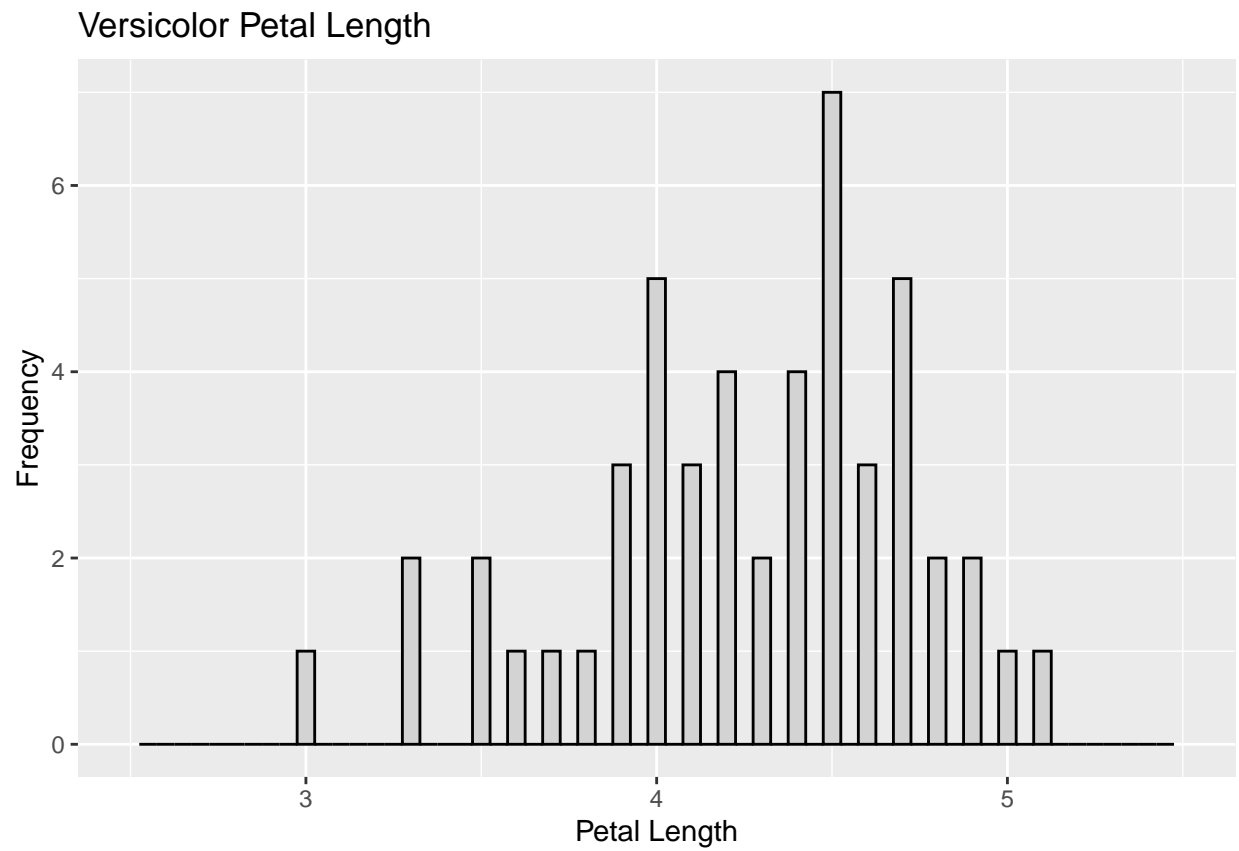
```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```



```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```

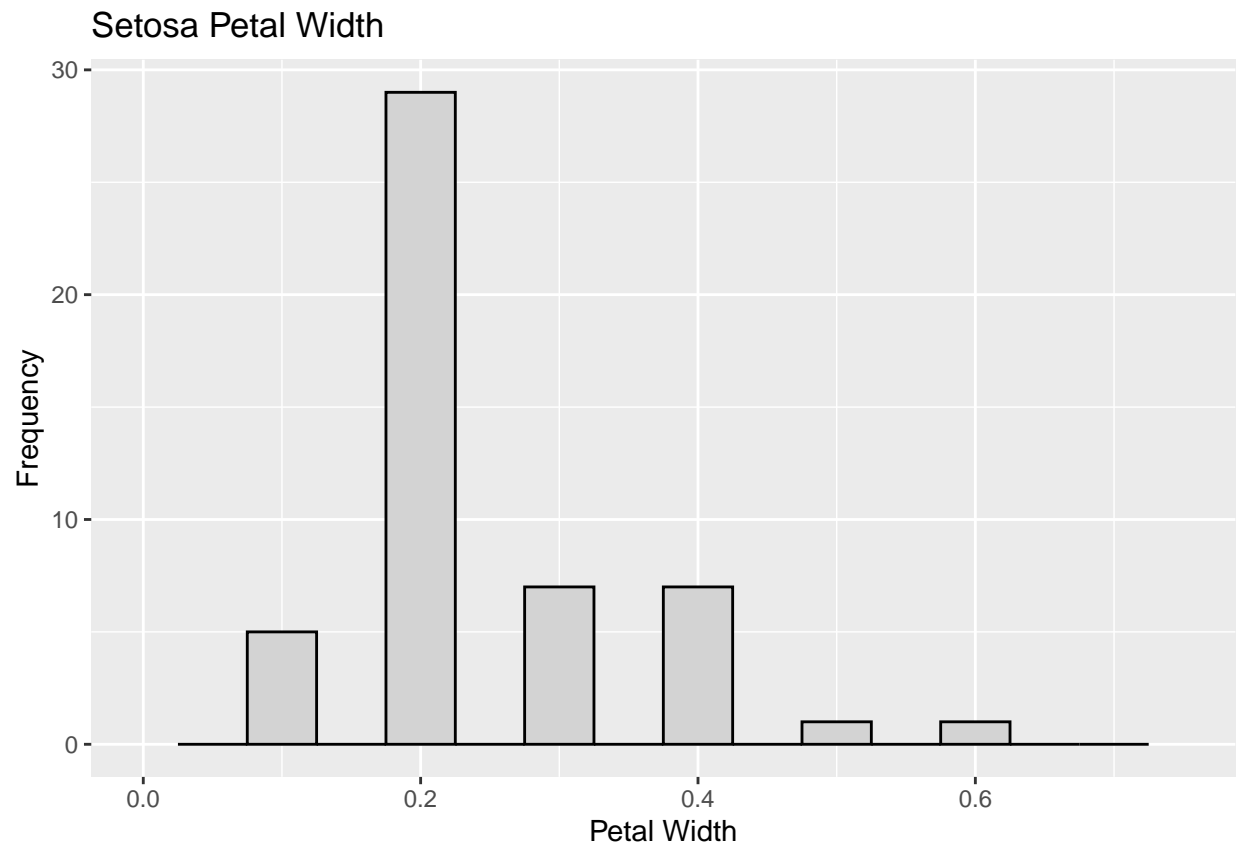
```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```



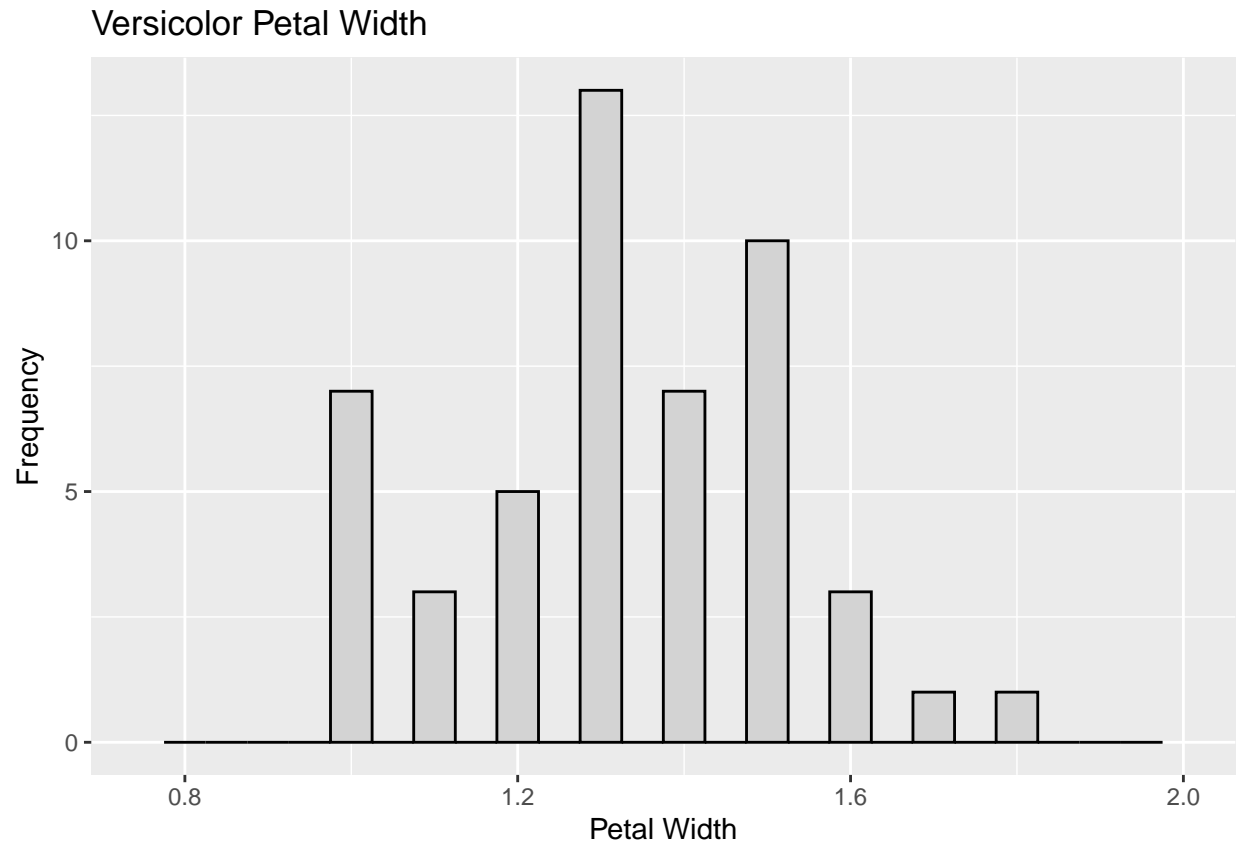
```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```



```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```

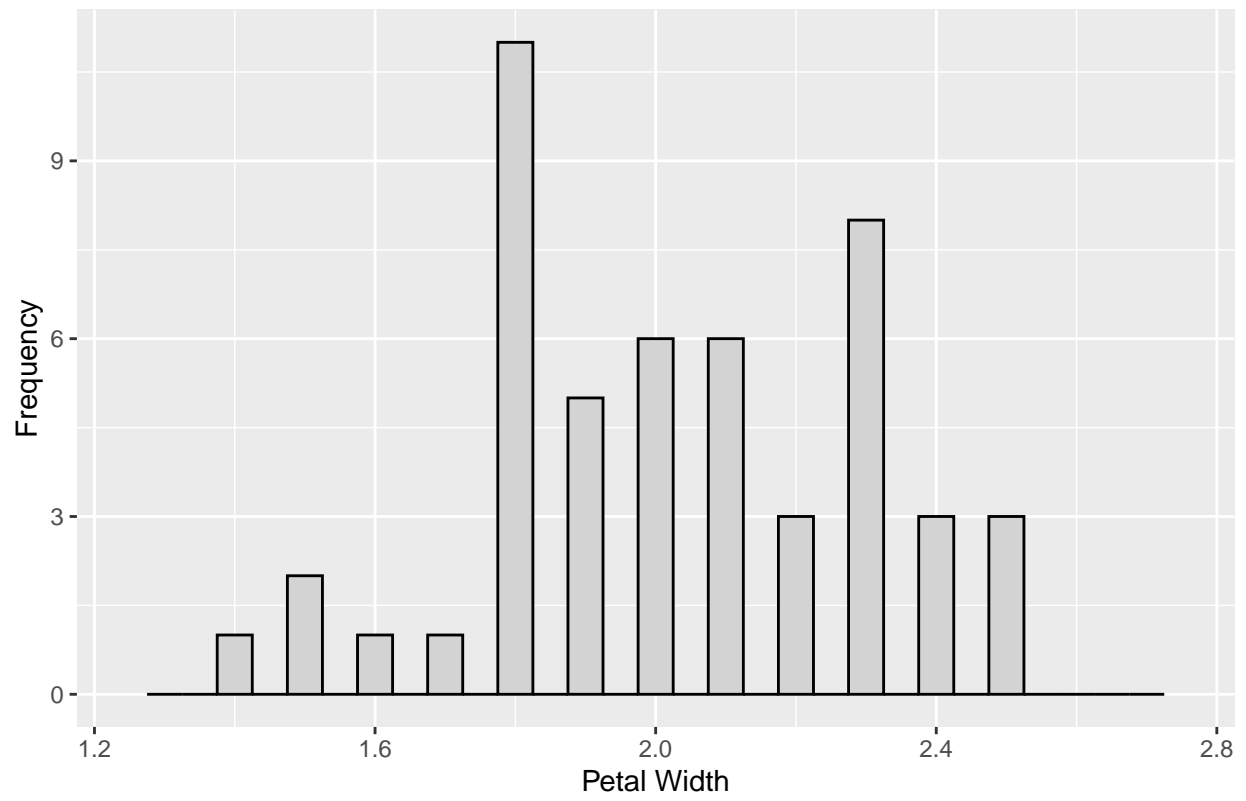


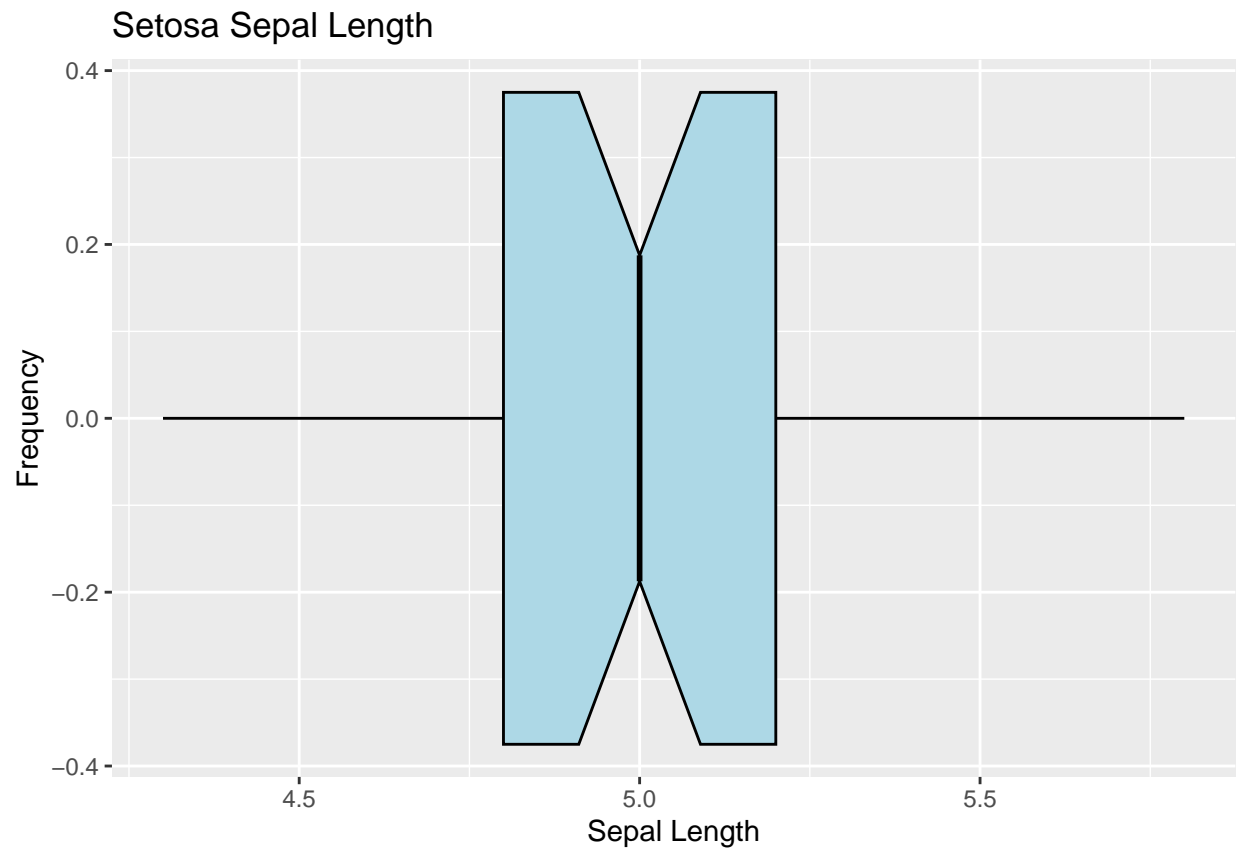
```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```

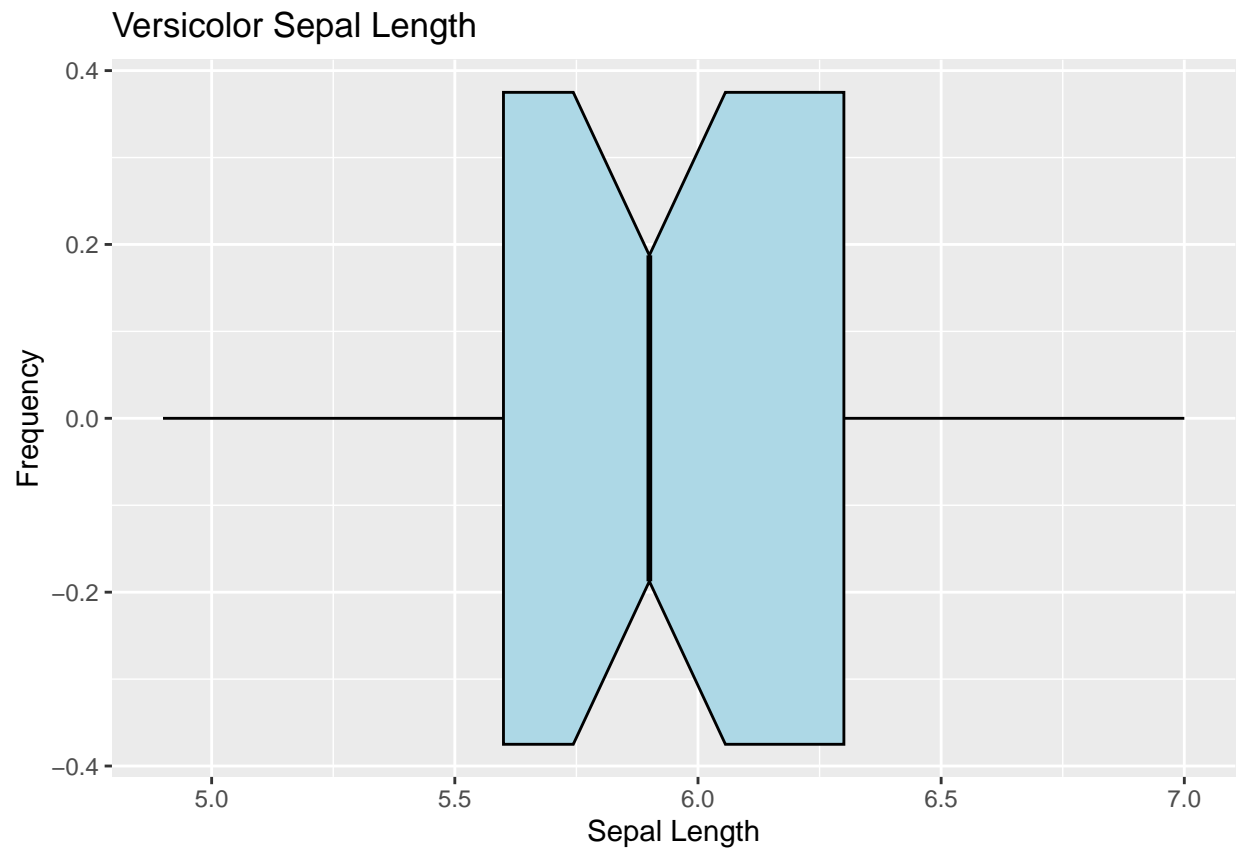


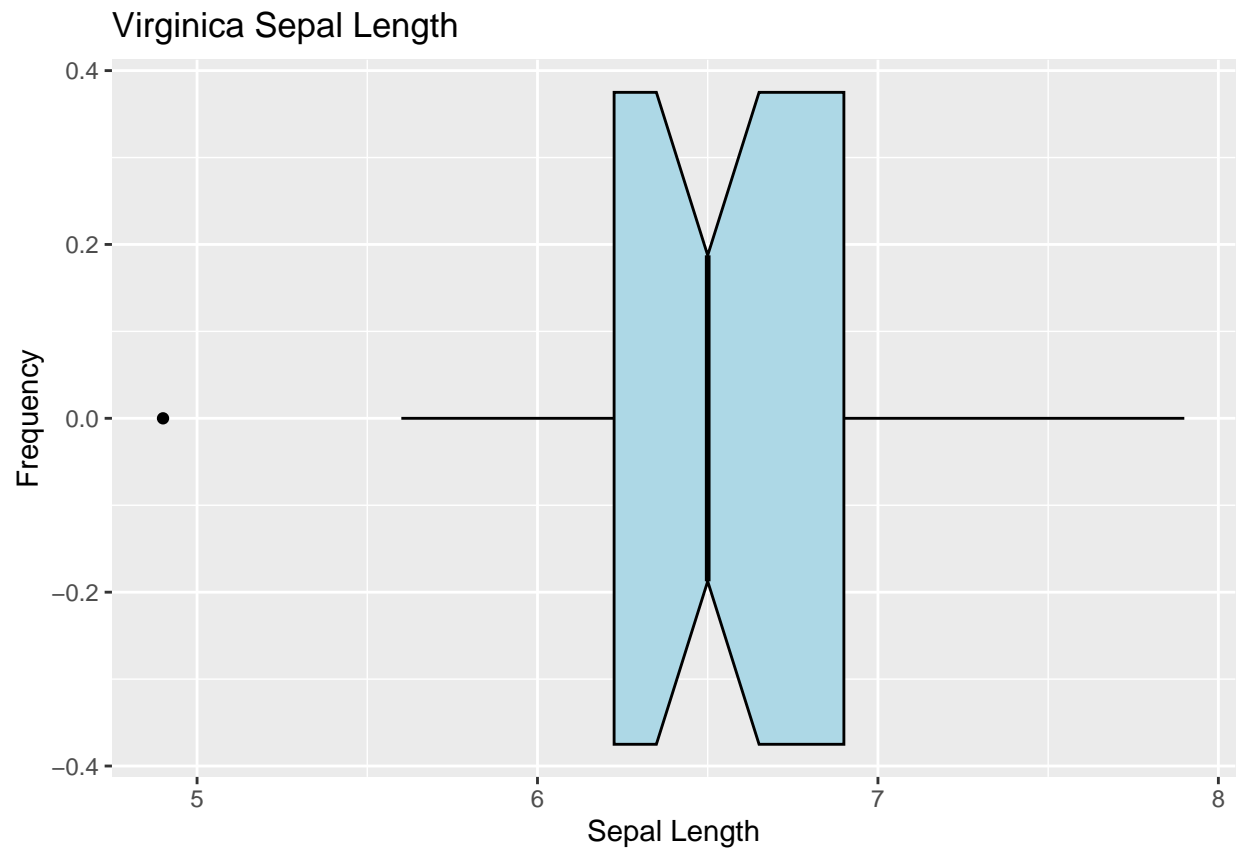
```
## Warning: Removed 2 rows containing missing values or values outside the scale range
## ('geom_bar()').
```

Virginica Petal Width

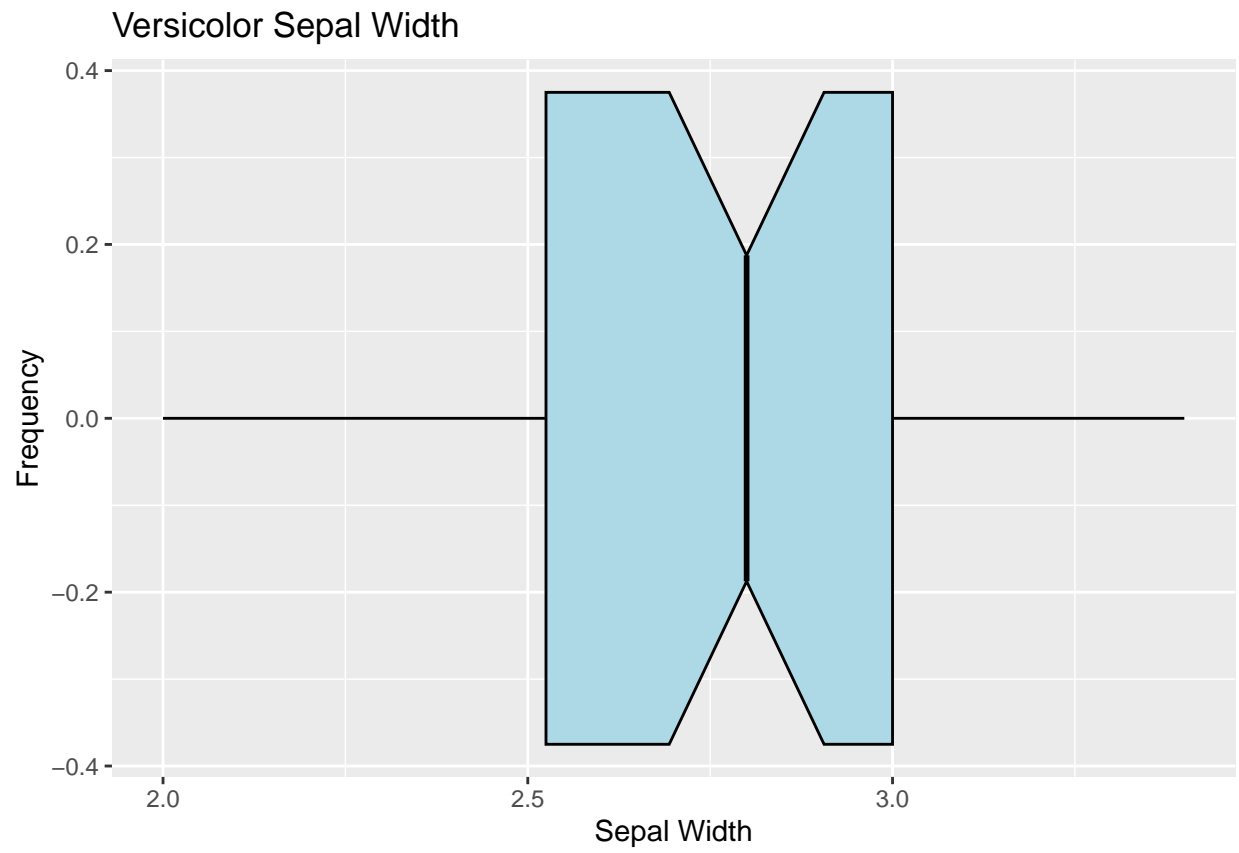




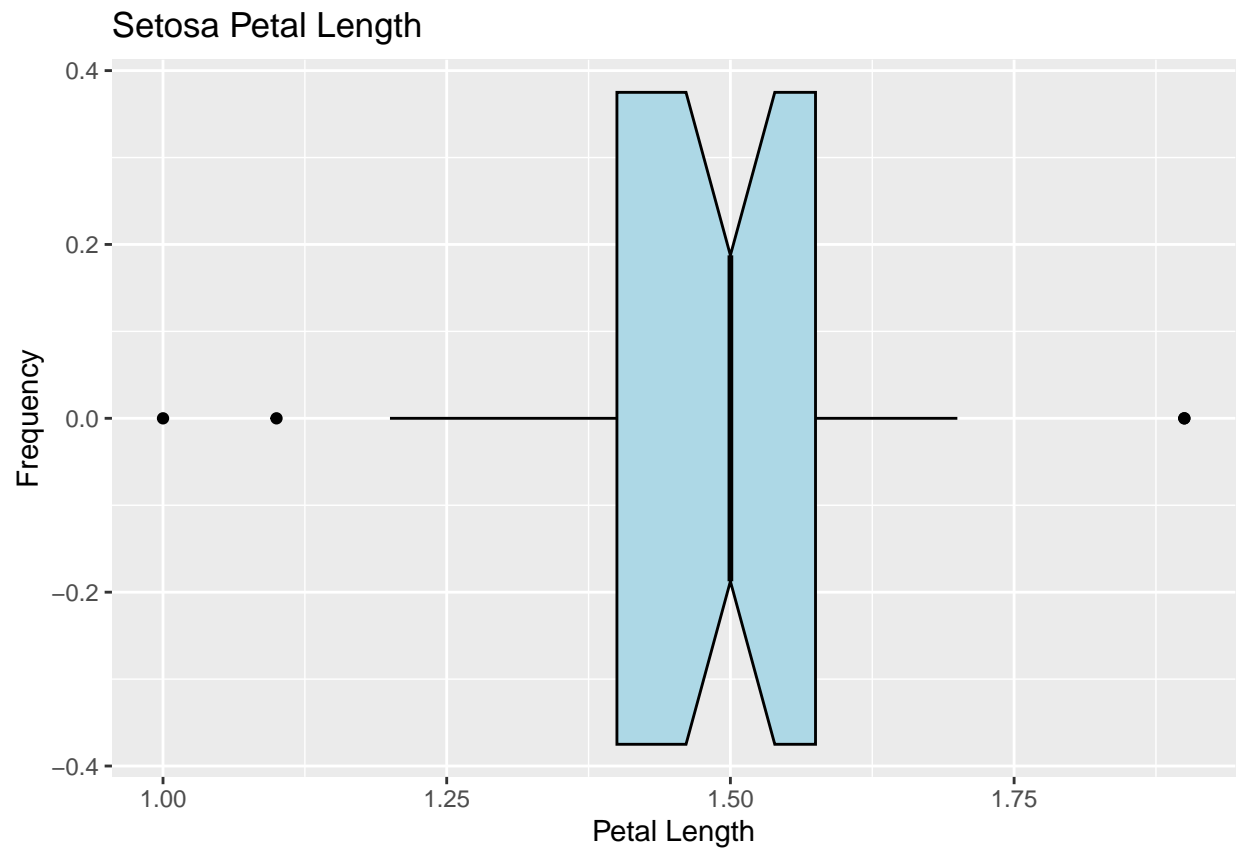


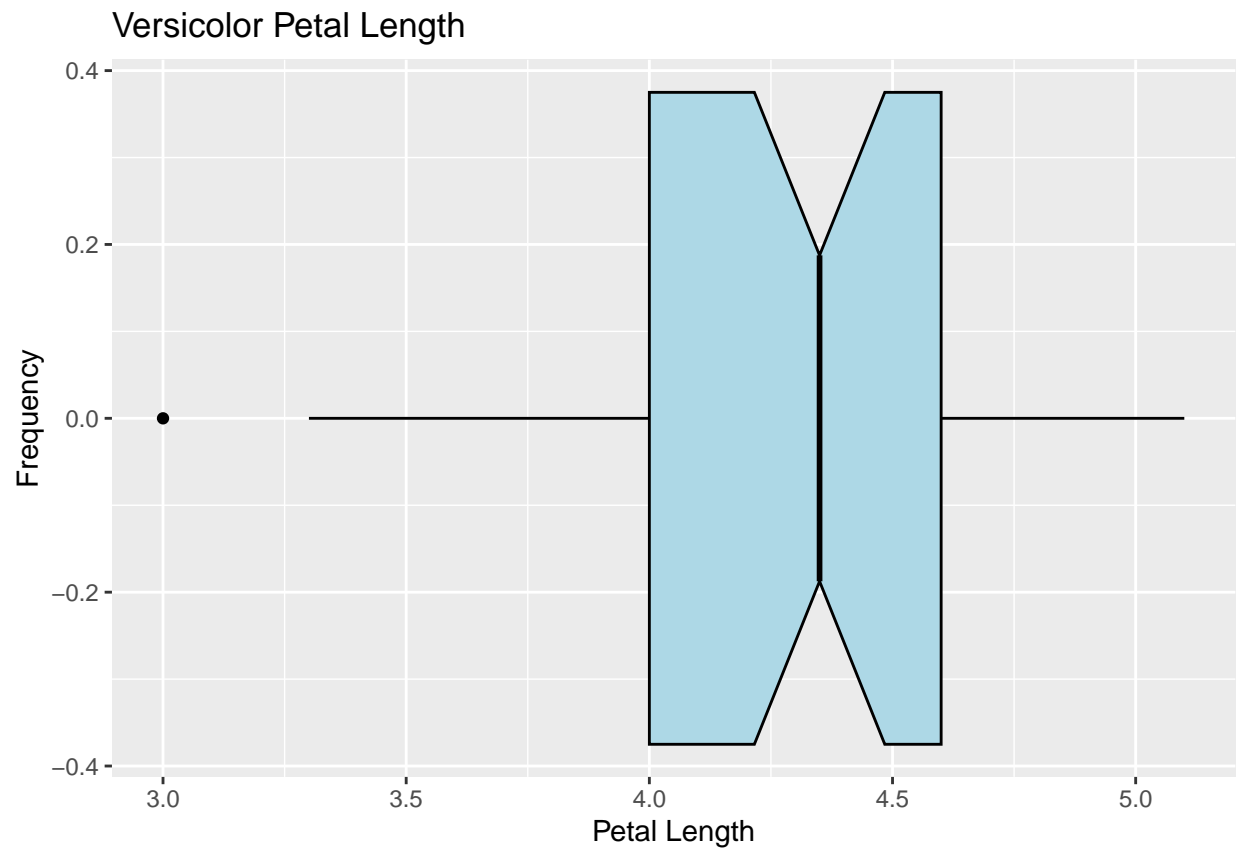


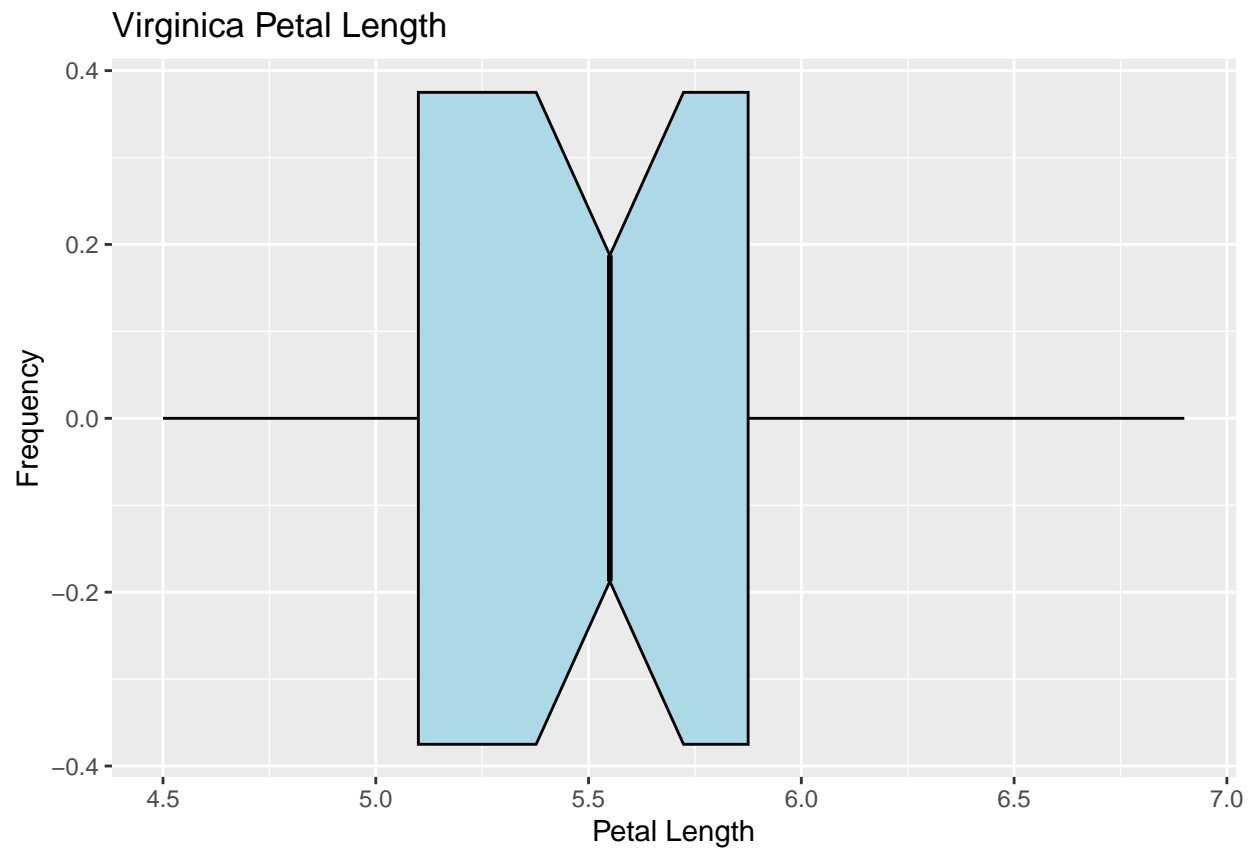




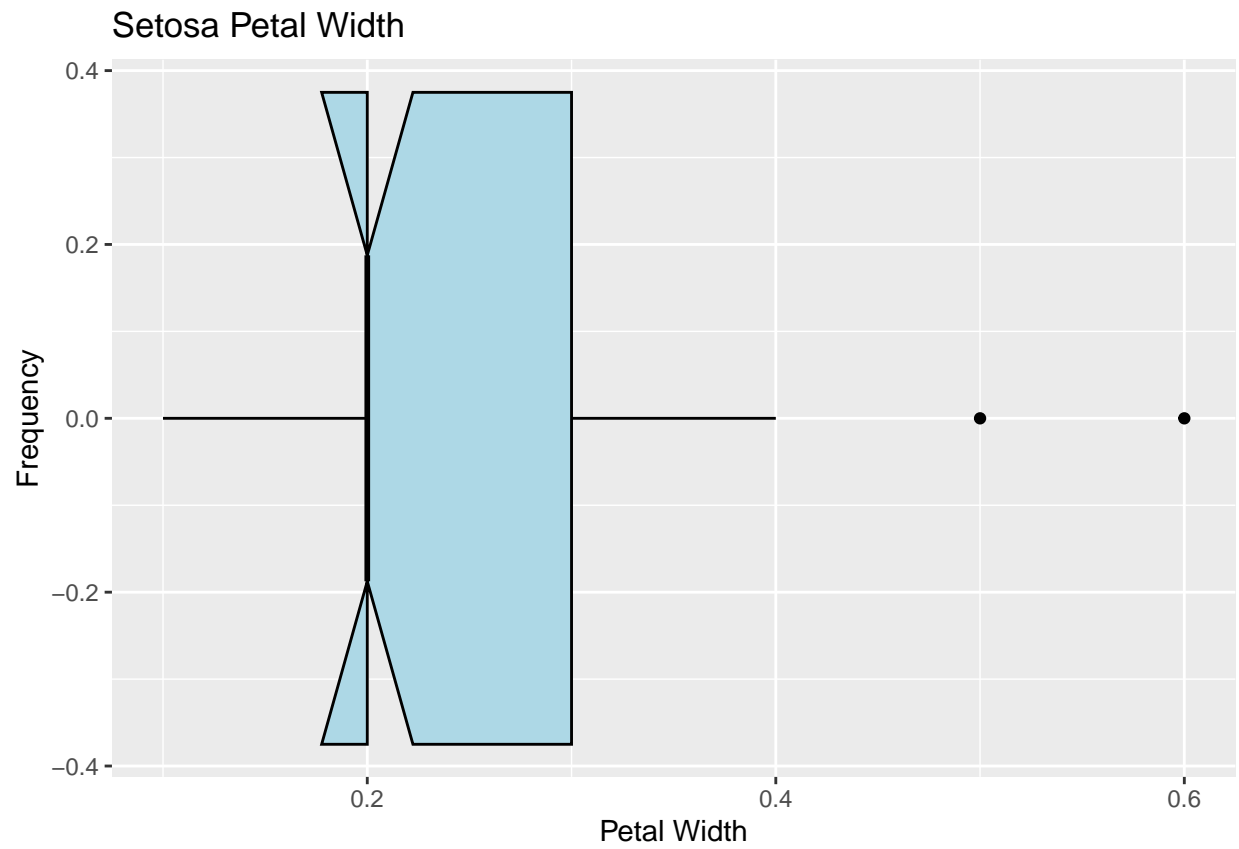


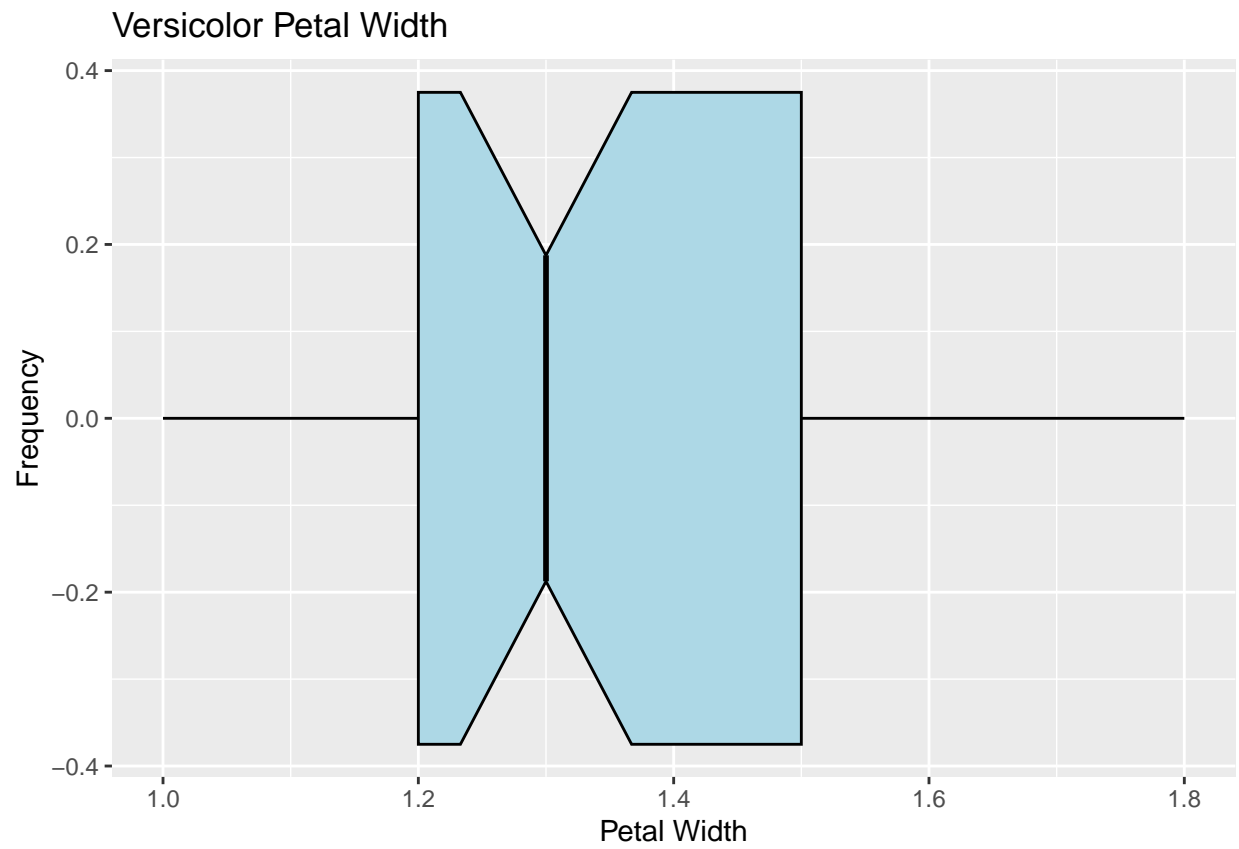


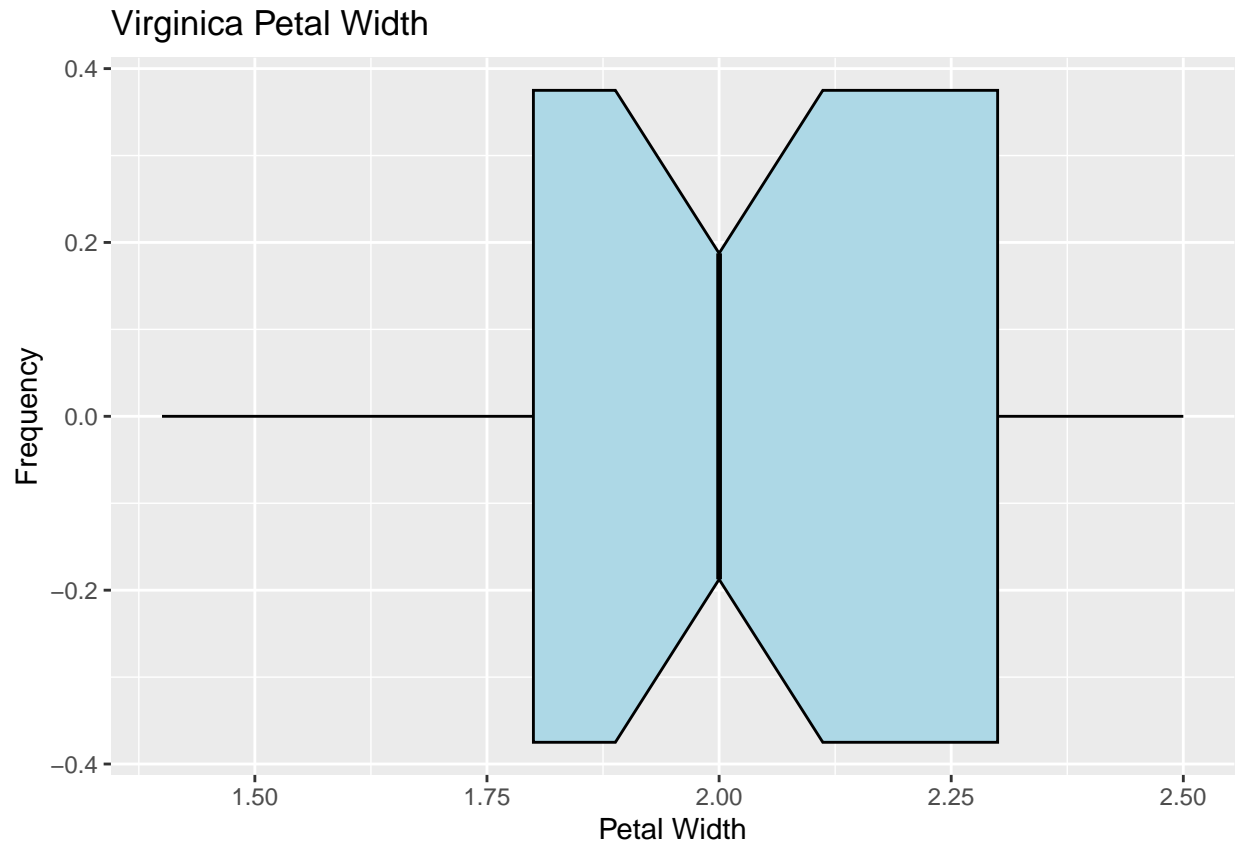




```
## Notch went outside hinges  
## i Do you want 'notch = FALSE'?
```







Iris species Setosa has the shortest average sepal length of this data set while Virginica has the longest. Versicolor is in between these two. Average sepal width of Versicolor is the shortest, with Virginica in the middle, and Setosa being the longest. The average petal length increases from Setosa, the shortest, with Versicolor in the middle and Virginica as the longest. Average petal width increases from Setosa, the shortest, with Versicolor in the middle and Virginica being the longest.