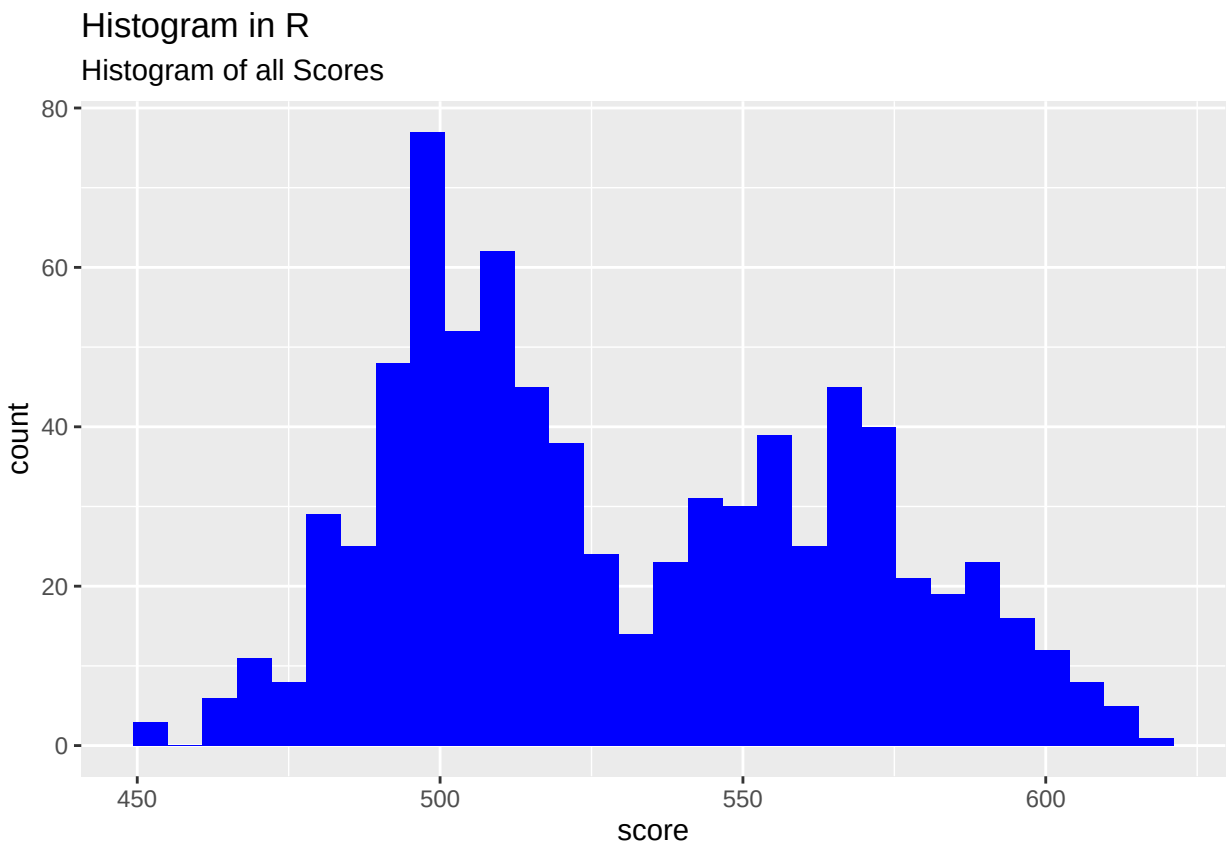
R Notebook

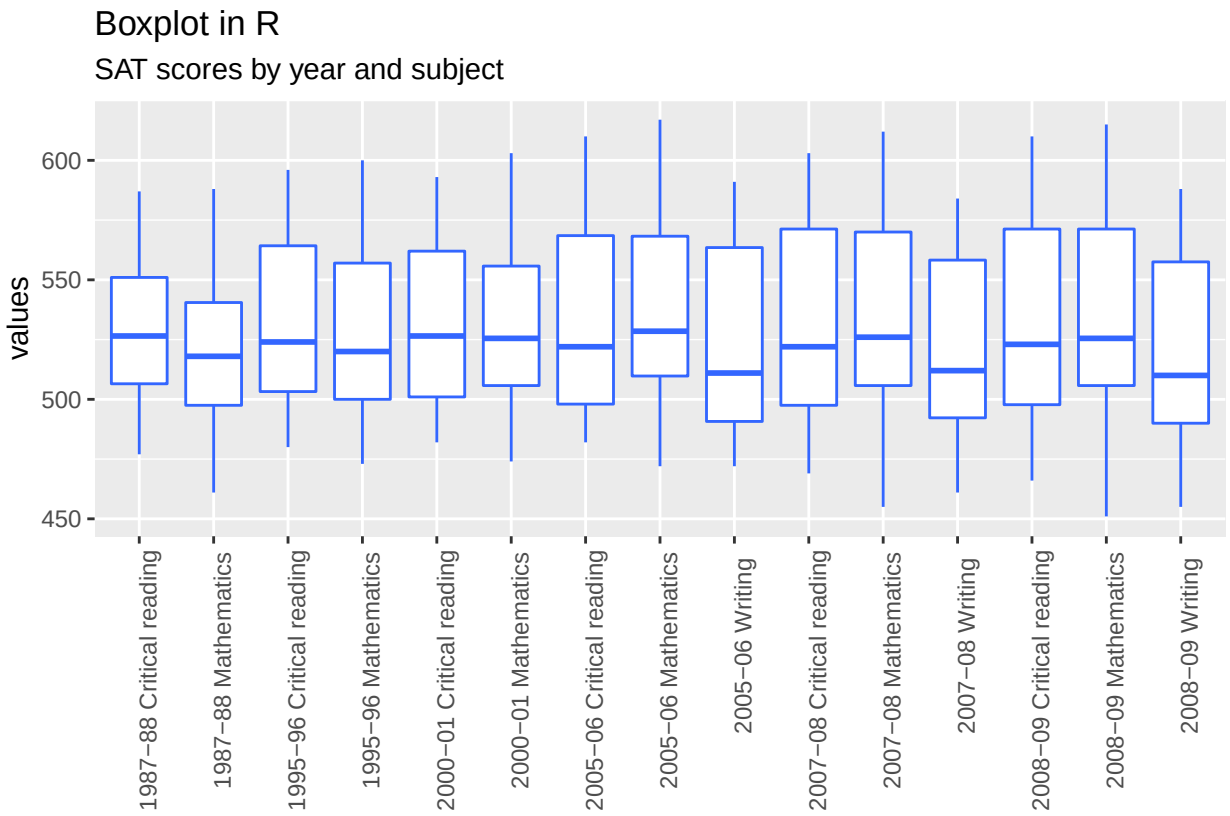
```
setwd("C:/Users/aarme/OneDrive/Desktop/640/ex6-2")
library(readxl)
ed1 <- read.csv("ed_clean.csv", check.names = FALSE)
```

```
library(ggplot2)
val <- as.matrix(ed1[,2:16])
val <- as.vector(val)
ggplot() + geom_histogram(aes(val), fill= 'blue') + ggtitle('Histogram in R', subtitle = 'Histogram of a
```

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```




```
ggplot(stack(ed1[2:16]), aes(x= ind, y = values))  + geom_boxplot(fill = "white", colour = "#3366FF") +
```




```
library(dplyr)
```

```
## Warning: package 'dplyr' was built under R version 3.6.3
```

```
##
## 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
```

```
wr = ed1[,c(1,16)]
colnames(wr) = c("state", "Writing_2008_09")
bullet_base <- data.frame(rank = c( "Ok", "Good", "Excellent"),
  value = c(min(val), median(val) - min(val), max(val) - median(val)))
bullet_base_rep <-
  do.call("rbind", replicate(nrow(ed1), bullet_base, simplify = FALSE)) %>%
  mutate(name = sort(rep(ed1$State, 3) ))
dev.new(width=5, height=15)
ggplot() + geom_bar(data = bullet_base_rep, aes(x = name, y = value, fill = rank), stat = "identity", po
```

```
library(ggridges)
```

```
## Warning: package 'ggridges' was built under R version 3.6.3
```

```
ed2 <- cbind(ed1[1], stack(ed1[2:16]))
ggplot(data = ed2, aes(x= values, y= State, fill= State) ) +geom_density_ridges(show.legend = FALSE) + g
```

```
## Picking joint bandwidth of 4.77
```