Week 11 & 12

Code

Hide

```
#load libraries
library(ggplot2)
```

```
Use suppressPackageStartupMessages() to eliminate package startup messages
```

Hide

```
library(dplyr)
```

```


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
```

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```
library(tidyr)
library(tidyverse)
```

```
Registered S3 methods overwritten by 'dbplyr':
  method         from
  print.tbl_lazy
  print.tbl_sql
-- Attaching packages --------------------------------------------------------------------------------------- tidyverse 1.3.1 --
v tibble  3.1.6     v stringr 1.4.0
v readr   2.1.0     v forcats 0.5.1
v purrr   0.3.4
-- Conflicts ------------------------------------------------------------------------------------------ tidyverse_conflicts() --
x dplyr::filter() masks stats::filter()
x dplyr::lag()    masks stats::lag()
```

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```
library(hrbrthemes)
```

```
Registering Windows fonts with R
NOTE: Either Arial Narrow or Roboto Condensed fonts are required to use these themes.
      Please use hrbrthemes::import_roboto_condensed() to install Roboto Condensed and
      if Arial Narrow is not on your system, please see https://bit.ly/arialnarrow
```

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```
library(pivottabler)
library(areaplot)
library(plotly)
```

```


Attaching package: ‘plotly’

The following object is masked from ‘package:ggplot2’:

    last_plot

The following object is masked from ‘package:stats’:

    filter

The following object is masked from ‘package:graphics’:

    layout
```

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```
library(readxl)
```

Hide

```
#import data
satdf = read.csv("C://Users//longr//Documents//DSC 640//Weeks 11 & 12//Exercises 6.2//education.
csv")
```

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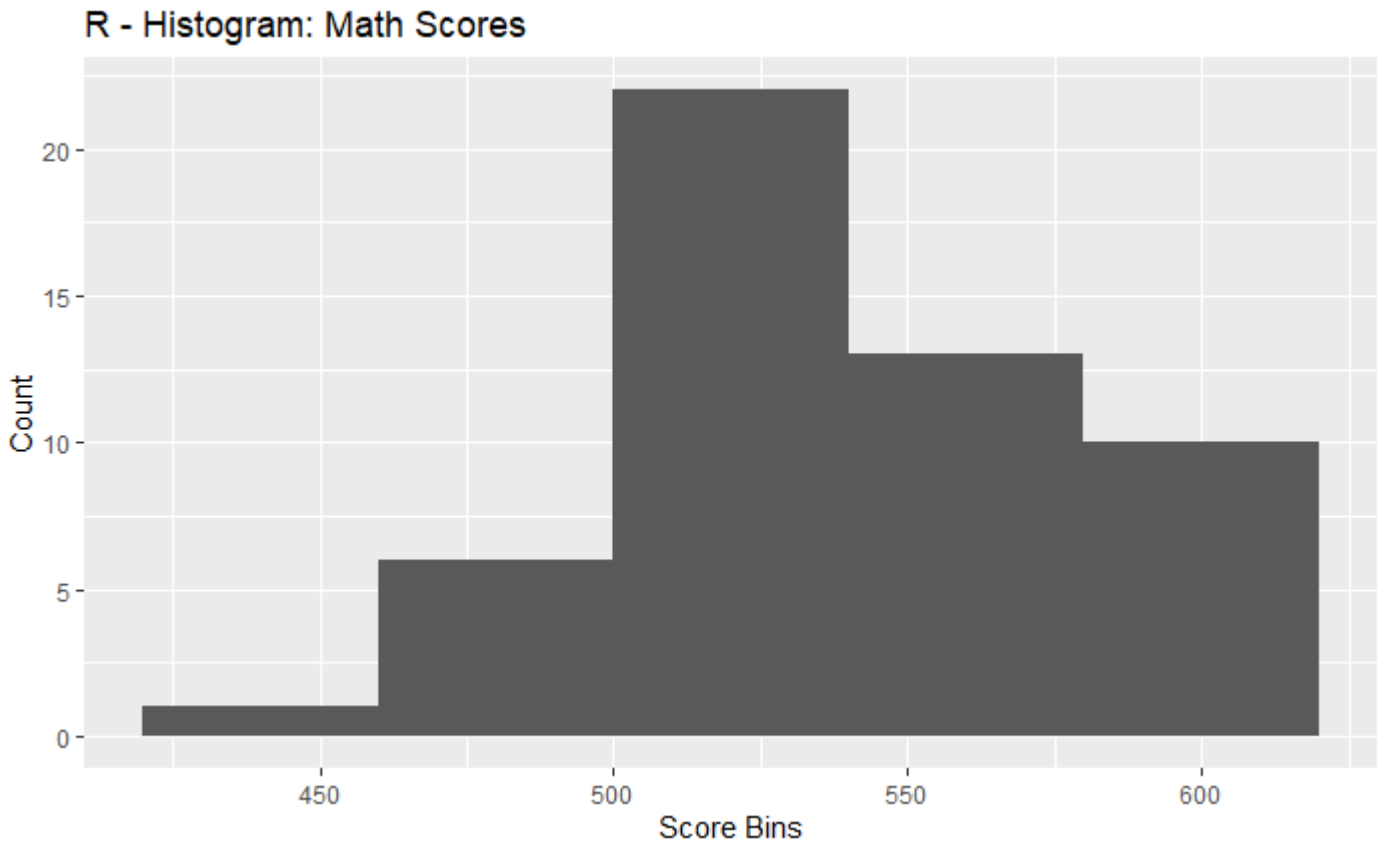
```
#Histogram
ggplot(satdf, aes(x=math)) +
  geom_histogram(binwidth=40)+
  xlab("Score Bins")+ylab("Count")+
  ggtitle("R - Histogram: Math Scores")
```



Hide

```
#Box Plot
bpdf <- satdf[ -c(1,5:7)]#new df for boxplot
stacked_bpdf <- stack(bpdf)
```

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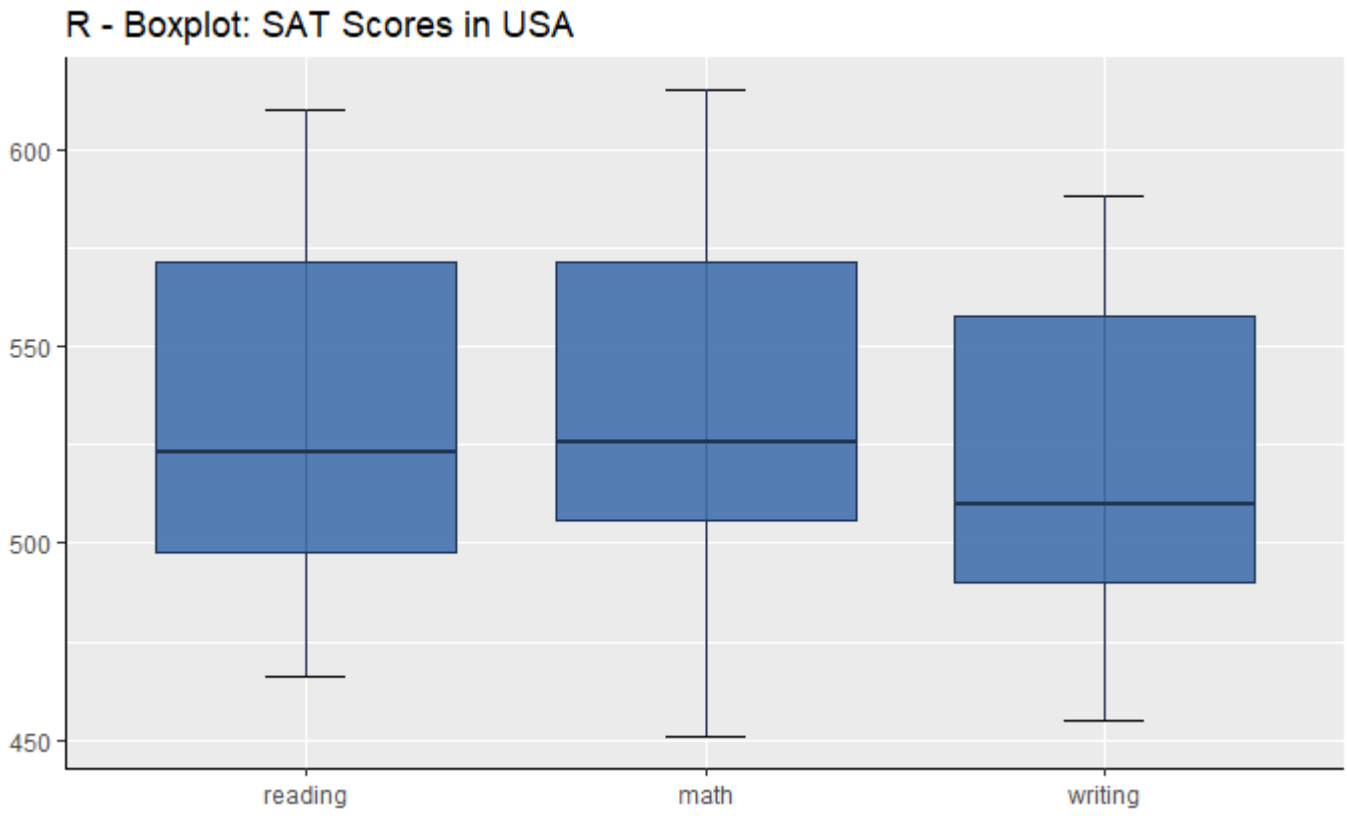
```
#boxplot(stacked_bpdf$values ~ stacked_bpdf$ind,
#        col = rainbow(ncol(bpdf)))
```

Hide

```
#https://r-coder.com/boxplot-r/

ggplot(stacked_bpdf, aes(x = ind, y = values)) +
       stat_boxplot(geom = "errorbar",width = 0.2) +
       geom_boxplot(fill = "#4271AE", colour = "#1F3552",alpha = 0.9, outlier.colour = "red") +
       scale_y_continuous(name = "") +
       scale_x_discrete(name = "") +
       ggtitle("R - Boxplot: SAT Scores in USA") +
       theme(axis.line = element_line(colour = "black", size = 0.25))
```


R - Boxplot: SAT Scores in USA
600
550
500
450
reading
math
writing

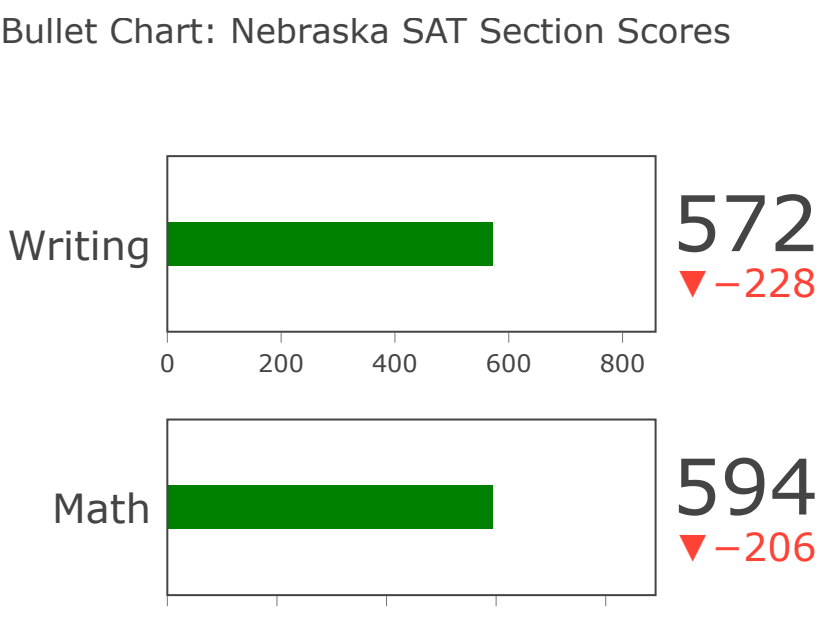
Hide

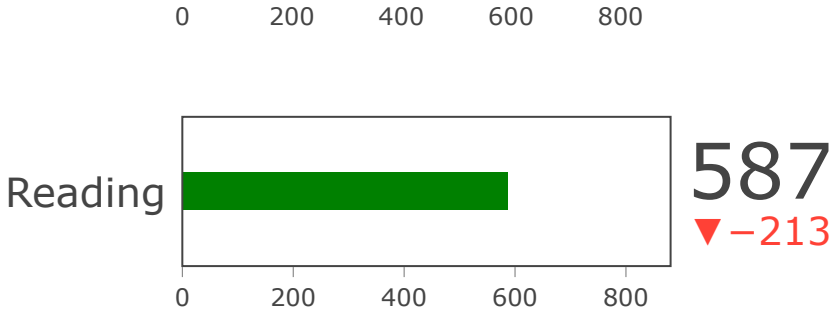
```
#Bullet Chart
fig <- plot_ly()

fig <- fig %>%
  add_trace(
    type = "indicator",
    mode = "number+gauge+delta",
    value = 587,
    delta = list(reference = 800),
    domain = list(x = c(0.25, 1), y = c(0.08, 0.25)),
    title =list(text = "Reading"),
    gauge = list(shape = "bullet"))
fig <- fig %>%
  add_trace(
    type = "indicator",
    mode = "number+gauge+delta",
    value = 594,
    delta = list(reference = 800),
    domain = list(x = c(0.25, 1), y = c(0.4, 0.6)),
    title = list(text = "Math"),
    gauge = list(shape = "bullet"))
fig <- fig %>%
  add_trace(
    type =  "indicator",
    mode = "number+gauge+delta",
    value = 572,
    delta = list(reference = 800 ),
    domain = list(x = c(0.25, 1), y = c(0.7, 0.9)),
    title = list(text = "Writing"),
    gauge = list(shape = "bullet"))

fig<- fig%>%
  layout(title = 'R - Bullet Chart: Nebraska SAT Section Scores', plot_bgcolor = "#e5ecf6")

fig
```





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```
NA
```

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```
#import data
ddf = read_excel("C://Users//longr//Documents//DSC 640//Weeks 11 & 12//Exercises 6.2//disney.xls
x")
```

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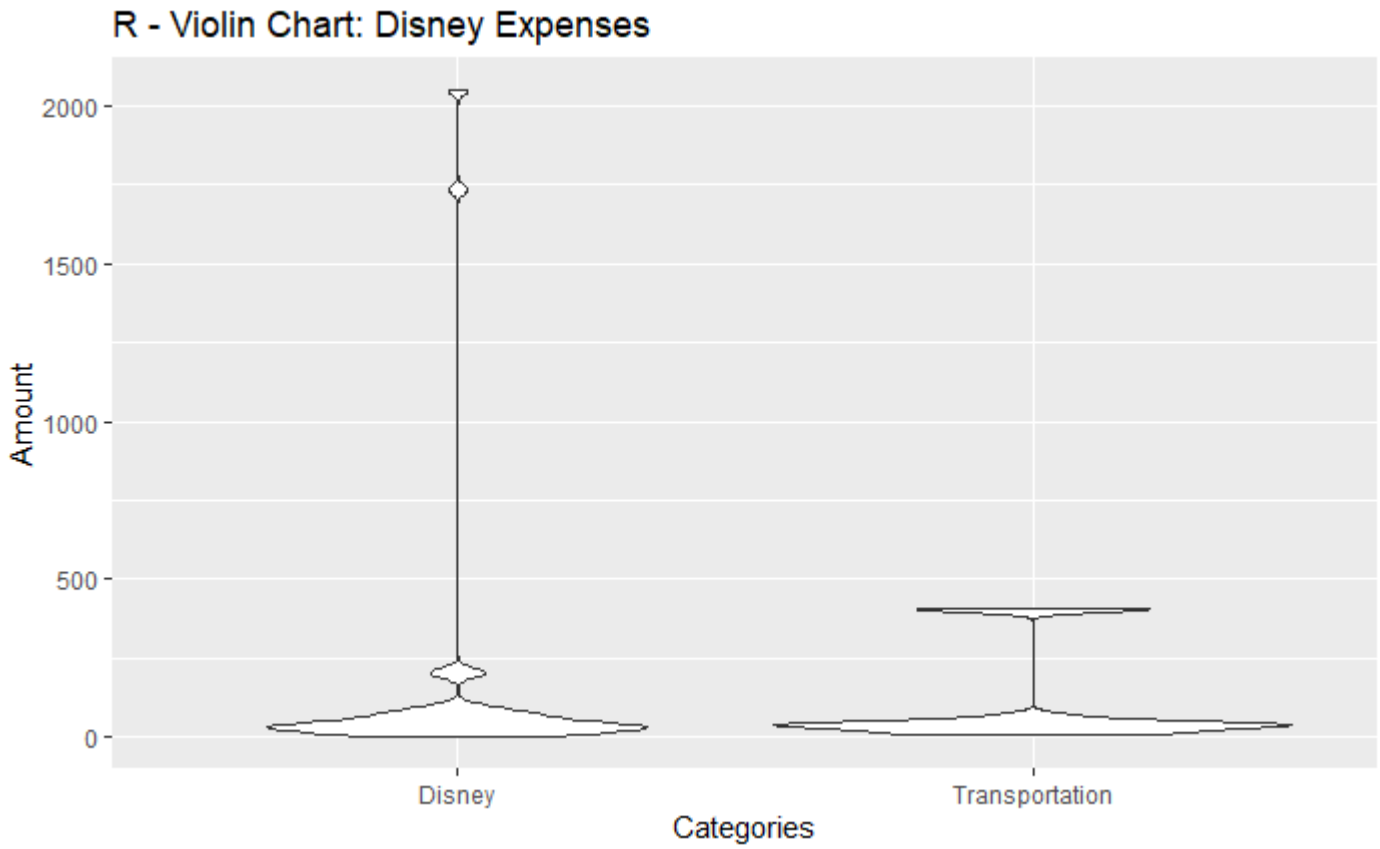
```
# Most basic violin chart
ggplot(ddf, aes(x=Category, y=Amount)) + # fill=name allow to automatically dedicate a color for
each group
  geom_violin()+
    xlab("Categories")+ylab("Amount")+
    ggtitle("R - Violin Chart: Disney Expenses")
```


R - Violin Chart: Disney Expenses
2000
1500
1000
500
0
Amount
Disney
Transportation
Categories