6.2 Assignment: histograms, box plots, and bullet charts

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Import, Plot, Summarize, and Save Data

```
#install.packages("rlang")
#remove.packages("rlang")
#install.packages("dplyr")
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
```

```
library(ggplot2)
theme_set(theme_minimal())
library(readxl)
#install.packages("dplyr")
library('magrittr')
#source("BulletGraph.R", local=TRUE)
#install.packages("devtools")
#install.packages("GGally")
library(devtools)
```

```
## Loading required package: usethis
```

```
require("d3Dashboard")
```

```
## Loading required package: d3Dashboard
```

Set the working directory to the root of your DSC 520 directory

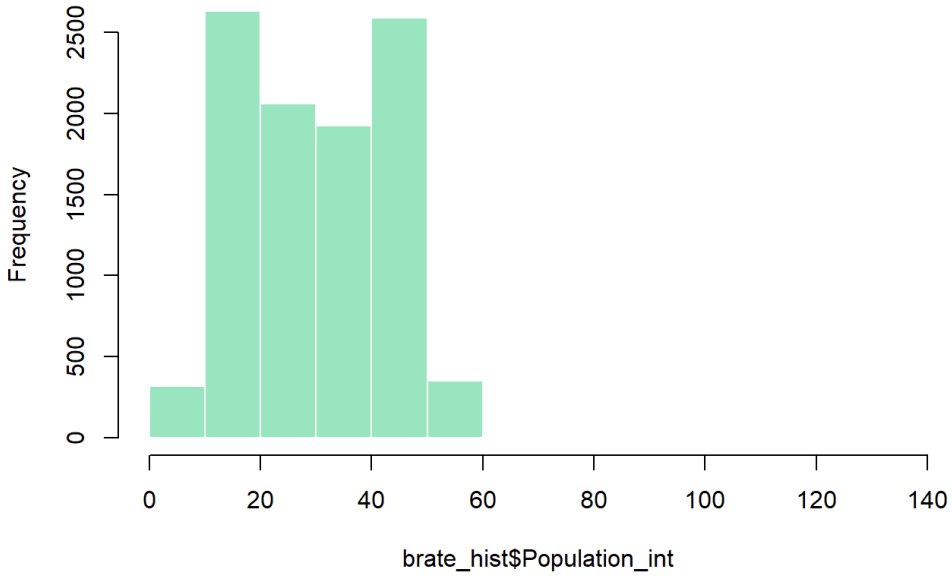
```
#setwd("C:/Users/21313711/Documents/DSC640/ex6-2/ex6-2/")
```

reading csv

```
# load birth rate data
brate_df <- read.csv('C:/Users/21313711/Documents/DSC640/ex6-2/ex6-2/birth-rate.csv')

# load crime data
crime_df <- read.csv('C:/Users/21313711/Documents/DSC640/ex6-2/ex6-2/crimeratesbystate-formatted.csv')

# load education data
education_df <- read.csv('C:/Users/21313711/Documents/DSC640/ex6-2/ex6-2/education.csv')

# format year columns
colnames(brate_df) <- gsub("X", "", colnames(brate_df))
```

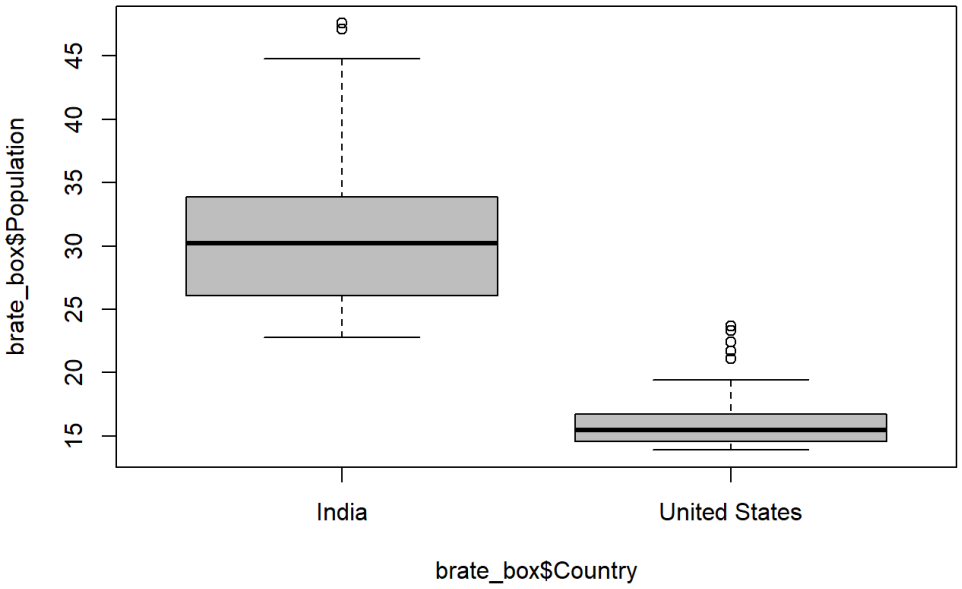
HISTOGRAM CHART

```
options(repr.plot.width = 4, repr.plot.height = 4)
##### create pivotted data for plotting
brate_hist <- reshape2::melt(brate_df, id=c("Country")) %>%
  dplyr::mutate("Country" = as.character(Country),
                "Year" = as.character(variable),
                "Population" = value,
                "Population_int" = ceiling(value)) %>%
  dplyr::select(c("Country","Year","Population", "Population_int"))

# create histogram of population data
hist(brate_hist$Population_int, col=rgb(0.2,0.8,0.5,0.5) , border=F , main="")
```



Box plot

```
brate_box <- brate_hist %>%
  dplyr::filter(Country %in% c("United States", "India"))
boxplot(brate_box$Population ~ brate_box$Country , col="grey")
```



Bullet chart

```
crime_bullet <- crime_df %>%
  dplyr::filter(stringr::str_trim(state, "both") == "United States") %>%
  dplyr::select(c(state, burglary))

ytd2005 <- list(
  title=list("United States"),
  subtitle=list("Burglary"),
  range=list(c(0,500,750,1000)),
  measures=list(c(0, crime_bullet$burglary)),
  markers=list(250, 26, 550, 2100, 4.2))
```

plot

```
bulletGraph(ytd2005)
```

parallel plot

```
education_parallel <- education_df %>%
  dplyr::filter(stringr::str_trim(state, "both") != "United States")
MASS::parcoord(education_parallel[,c(2:4)] )
```