Exercise: Weeks 7 & 8 - Charts (R)

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LOADING LIBRARIES.

```
library(ggplot2)
library(ggplot2)
library(readxl)
library(lessR)
library(dplyr)
library(tidyr)
# library(treemap)
```

```
# install.packages("treemap")
```

SETTING WORKING DIRECTORY.

```
setwd("/Users/aaronbrown/Documents/Classwork/DSC 640 - Data Presentation and Visualization/")
```

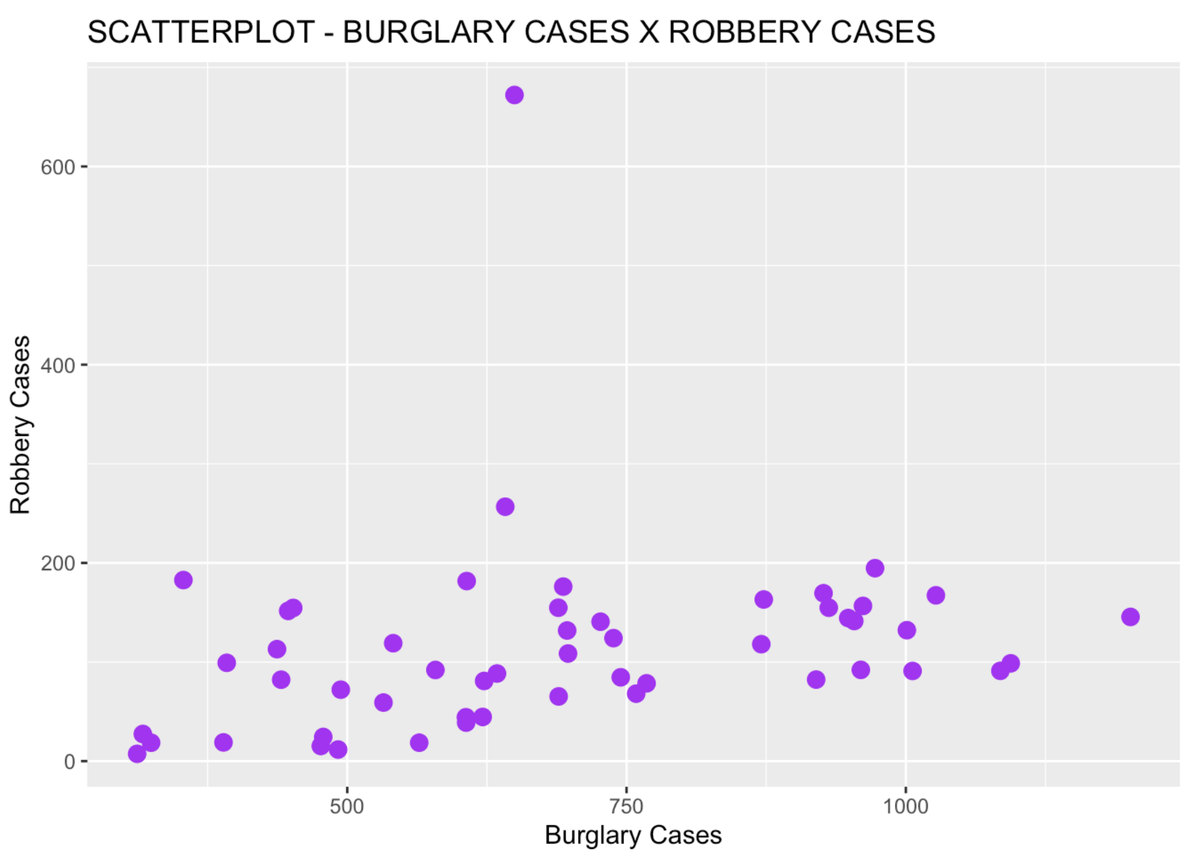
LOADING DATA.

```
crime_df <- read.csv("/Users/aaronbrown/Documents/Classwork/DSC 640 - Data Presentation and Visualization/data/crimerates-by-state-2005.csv")
spending_df <- read.csv("/Users/aaronbrown/Documents/Classwork/DSC 640 - Data Presentation and Visualization/data/expenditures_BY_YEAR.csv")
```

```
print(crime_df)
```

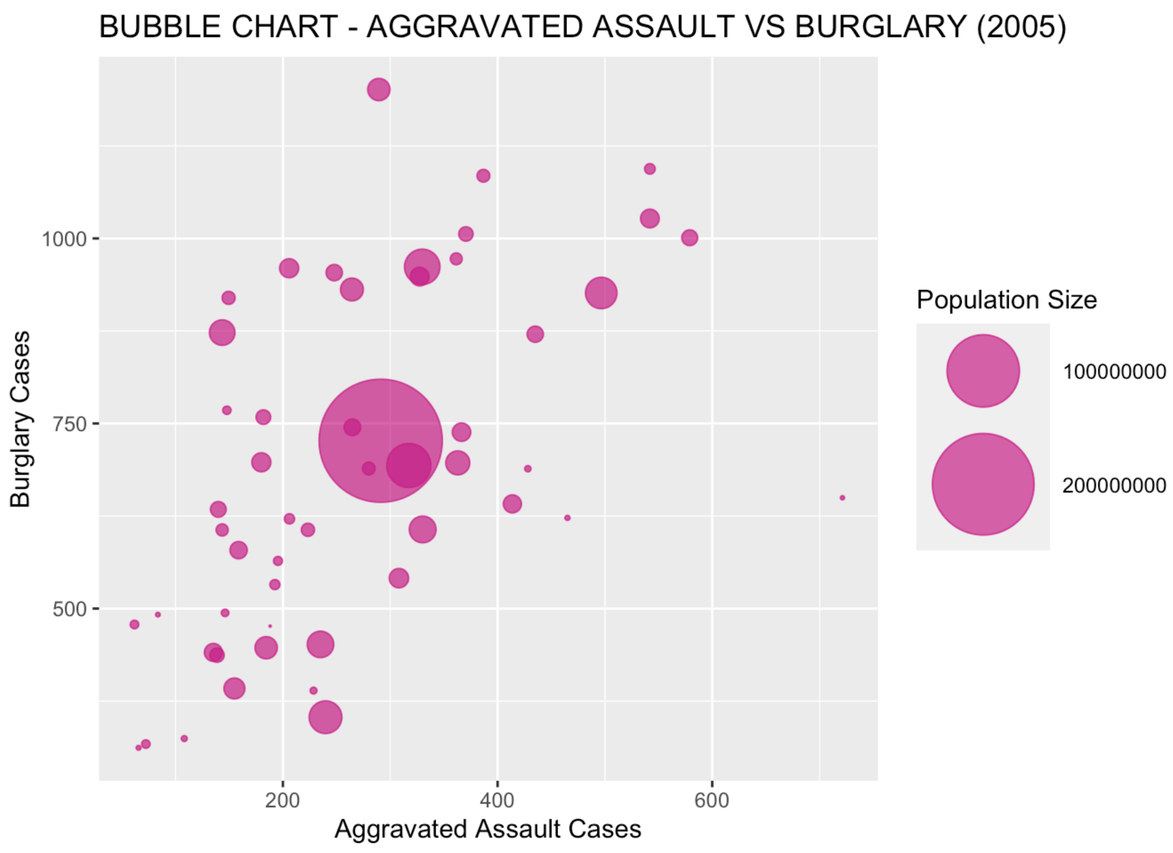
GENERATING SCATTERPLOT.

```
ggplot(crime_df, aes(burglary, robbery)) +  ggtitle("SCATTERPLOT - BURGLARY CASES X ROBBERY CASES") + geom_point(
shape = 19, color = "purple", size = 3) + labs(x="Burglary Cases", y="Robbery Cases")
```



GENERATING BUBBLE CHART

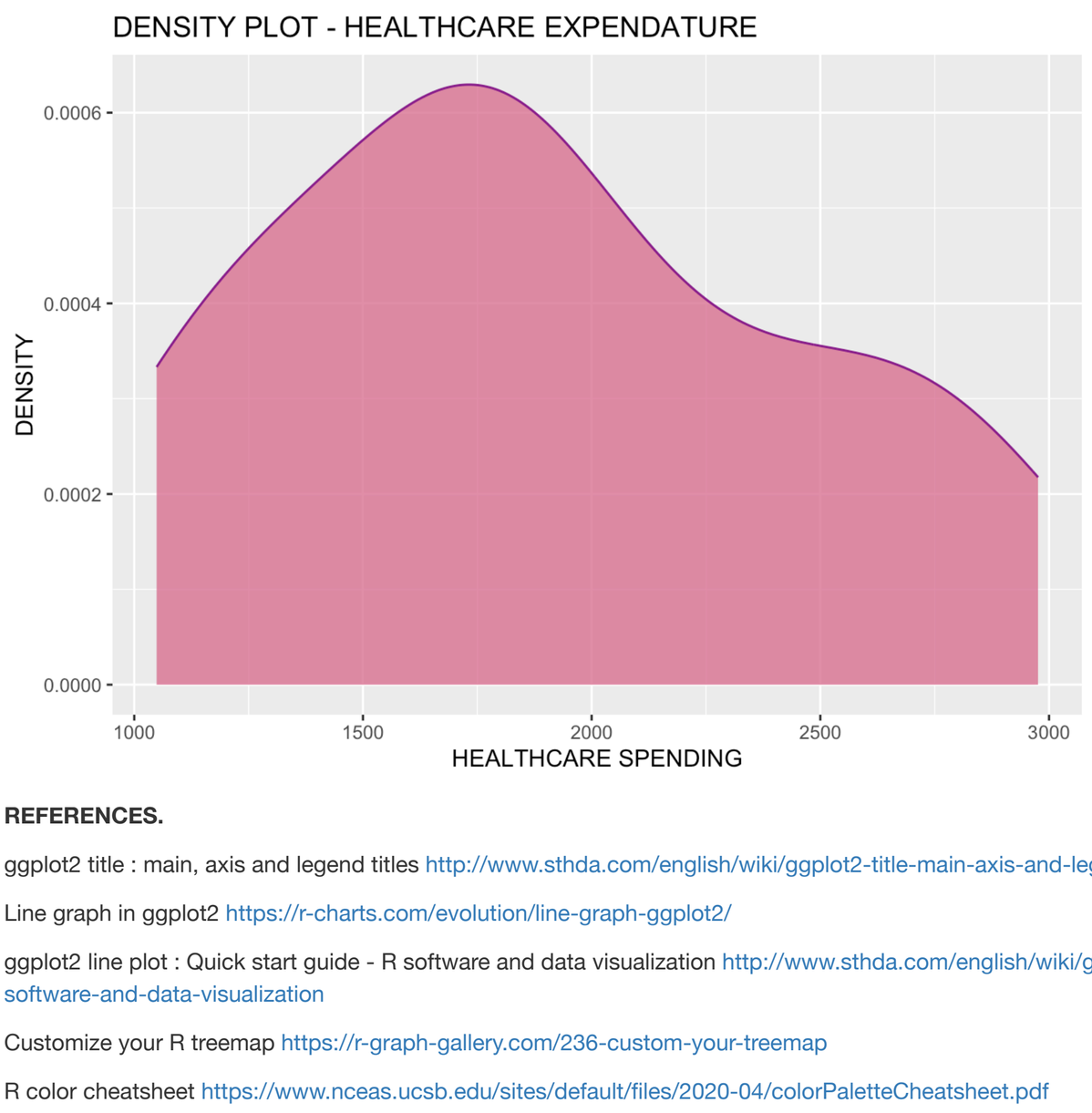
```
ggplot(crime_df, aes(aggravated_assault, burglary, size=population)) + geom_point(shape = 19,alpha=.7, color="mediumvioletred") + scale_size(range=c(0.1,24), name="Population Size")  + labs(x="Aggravated Assault Cases", y="Burglary Cases") + ggtitle("BUBBLE CHART - AGGRAVATED ASSAULT VS BURGLARY (2005)")
```



GENERATING DENSITY PLOT

```
print(spending_df)
```

```
ggplot(spending_df, aes(Healthcare)) + geom_density(fill="palevioletred", color="darkmagenta", alpha=0.8) +
  ggtitle("DENSITY PLOT - HEALTHCARE EXPENDATURE") + xlab("HEALTHCARE SPENDING") + ylab("DENSITY")
```



REFERENCES.

ggplot2 title : main, axis and legend titles http://www.sthda.com/english/wiki/ggplot2-title-main-axis-and-legend-titles

Line graph in ggplot2 https://r-charts.com/evolution/line-graph-ggplot2/

ggplot2 line plot : Quick start guide - R software and data visualization http://www.sthda.com/english/wiki/ggplot2-line-plot-quick-start-guide-r-software-and-data-visualization

Customize your R treemap https://r-graph-gallery.com/236-custom-your-treemap

R color cheatsheet https://www.nceas.ucsb.edu/sites/default/files/2020-04/colorPaletteCheatsheet.pdf

ggplot2 Quick Reference: colour (and fill) https://sape.inf.usi.ch/quick-reference/ggplot2/colour

GGPLOT POINT SHAPES BEST TIPS https://www.datanovia.com/en/blog/ggplot-point-shapes-best-tips/