Exercise 3.2 R

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1 Exercise 3.2: Tree Maps, Area Charts, and Stacked Area Charts: R

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[1]:
```
library(ggplot2)
library(treemapify)
library(formattable)
```

```
Warning message:
"package 'ggplot2' was built under R version 3.6.3"Warning message:
"package 'treemapify' was built under R version 3.6.3"Warning message:
"package 'formattable' was built under R version 3.6.3"
```

2 Tree map

[2]:
```
df <- read.delim("expenditures.txt")
head(df)
```

year	category	expenditure	sex
2008	Food	6443	1
2008	Alcoholic Beverages	444	1
2008	Housing	17109	1
2008	Apparel	1801	1
2008	Transportation	8604	1
2008	Healthcare	2976	1

[3]:
```
df$money <- currency(df$expenditure, digits = 0)

df$labels <- paste0(df$category,":\n",df$money, sep = "")
```

[4]:
```
df <- subset(df, year == 2008)

ggplot(data = df, aes(area = expenditure,
                      label = labels,
                      fill = category,
                subgroup = labels)) +
geom_treemap() +
```

```
geom_treemap_subgroup_text(place = "topleft", alpha = 1, colour = "black", size␣
↪= 12) +
ggtitle("Treemap for Annual Expendatures for 2008") +
theme(legend.position = "none")
```

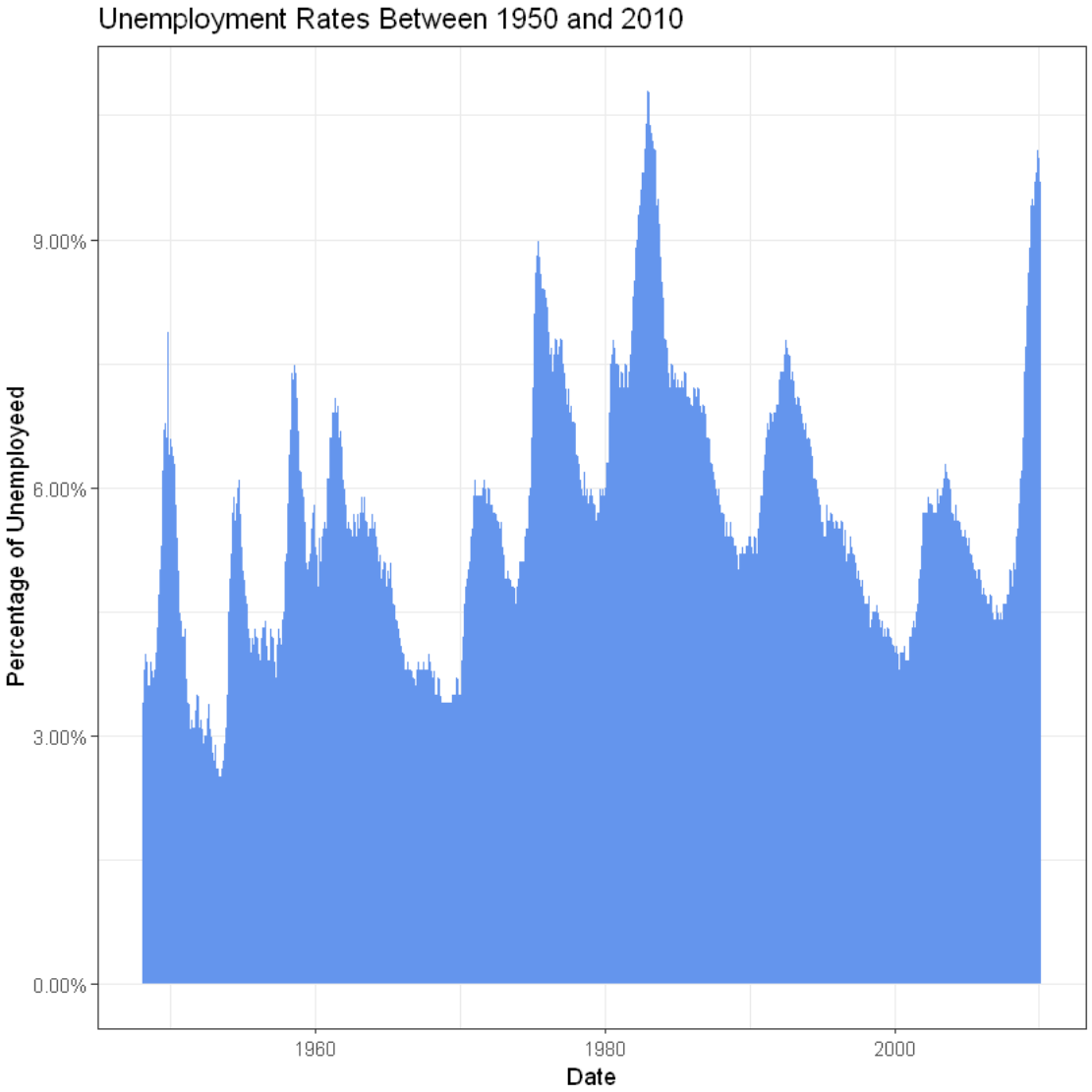
3 Area Chart

[6]:
```
df <- read.csv("unemployement-rate-1948-2010.csv")
head(df)
```

Series.id	Year	Period	Value
LNS14000000	1948	M01	3.4
LNS14000000	1948	M02	3.8
LNS14000000	1948	M03	4.0
LNS14000000	1948	M04	3.9
LNS14000000	1948	M05	3.5
LNS14000000	1948	M06	3.6

[7]:
```
df$Period <- as.numeric(sub("M", "", df$Period))
df$Date <- df$Year + df$Period / 12
df$Percentage <- df$Value / 100
```

[8]:
```
ggplot(data = df, aes(x = Date, y = Percentage)) +
geom_area(fill = "cornflowerblue") +
theme_bw() +
ggtitle("Unemployment Rates Between 1950 and 2010") +
scale_y_continuous(labels = scales::percent) +
ylab("Percentage of Unemployeed")
```



4 Stacked Area Chart

[9]:
```
df <- read.delim("expenditures.txt")
head(df)
```

year	category	expenditure	sex
2008	Food	6443	1
2008	Alcoholic Beverages	444	1
2008	Housing	17109	1
2008	Apparel	1801	1
2008	Transportation	8604	1
2008	Healthcare	2976	1

[10]:
```
ggplot(data = df, aes(x=year, y=expenditure, fill=category)) +
geom_area() +
scale_y_continuous(labels=scales::dollar_format()) +
ggtitle("Yearly Expendatures") +
theme_bw()
```