Python Charts Exercise 3.2

DSC 640

Inman, Gracie

Weeks 5 + 6

01/21/24

In [3]:
```
# Load packages
import pandas as pd
import plotly.express as px
```

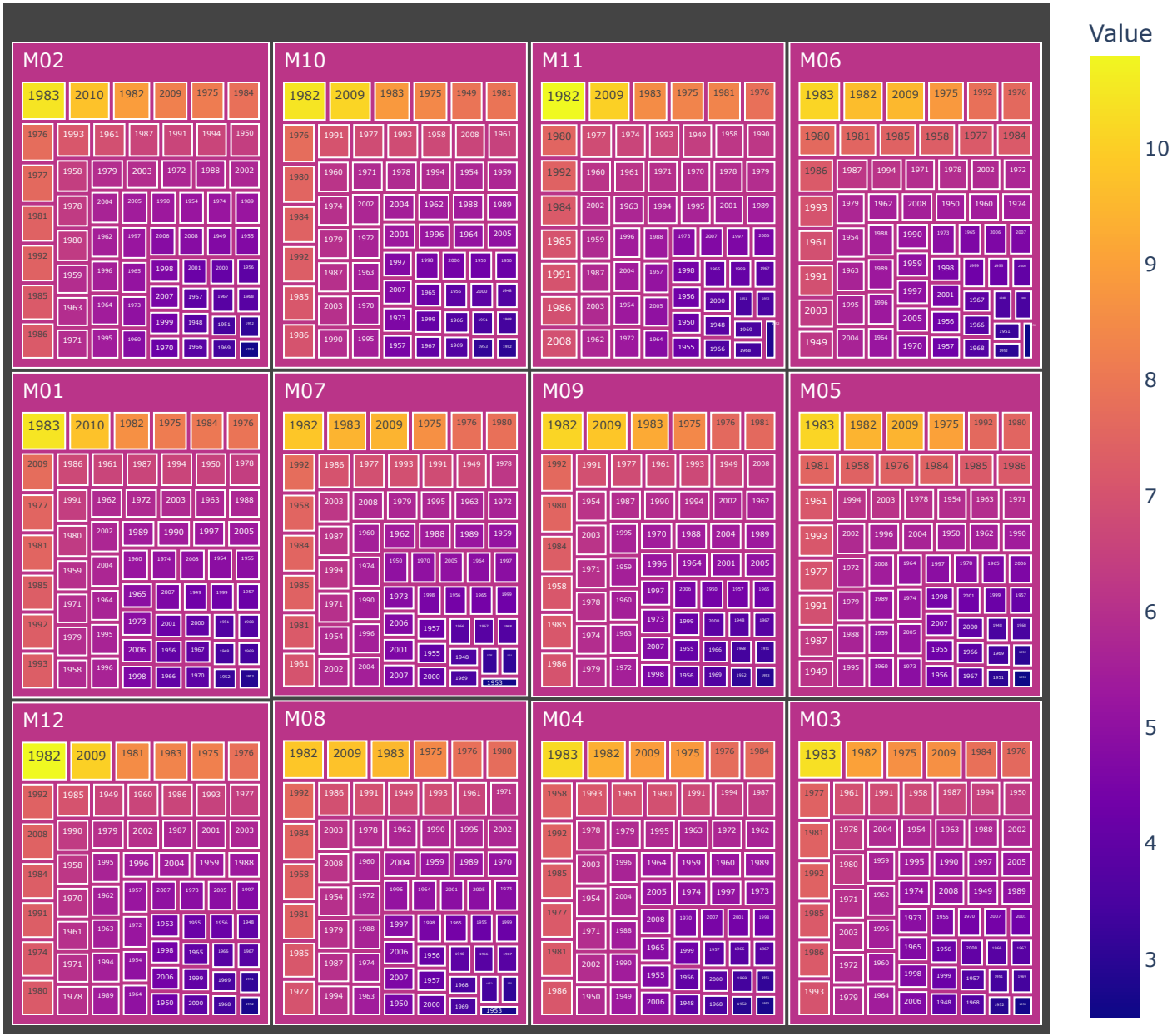
In [11]:
```
# Load the dataset
data = pd.read_csv("unemployement-rate-1948-2010.csv")
data.head()
```

Out[11]:

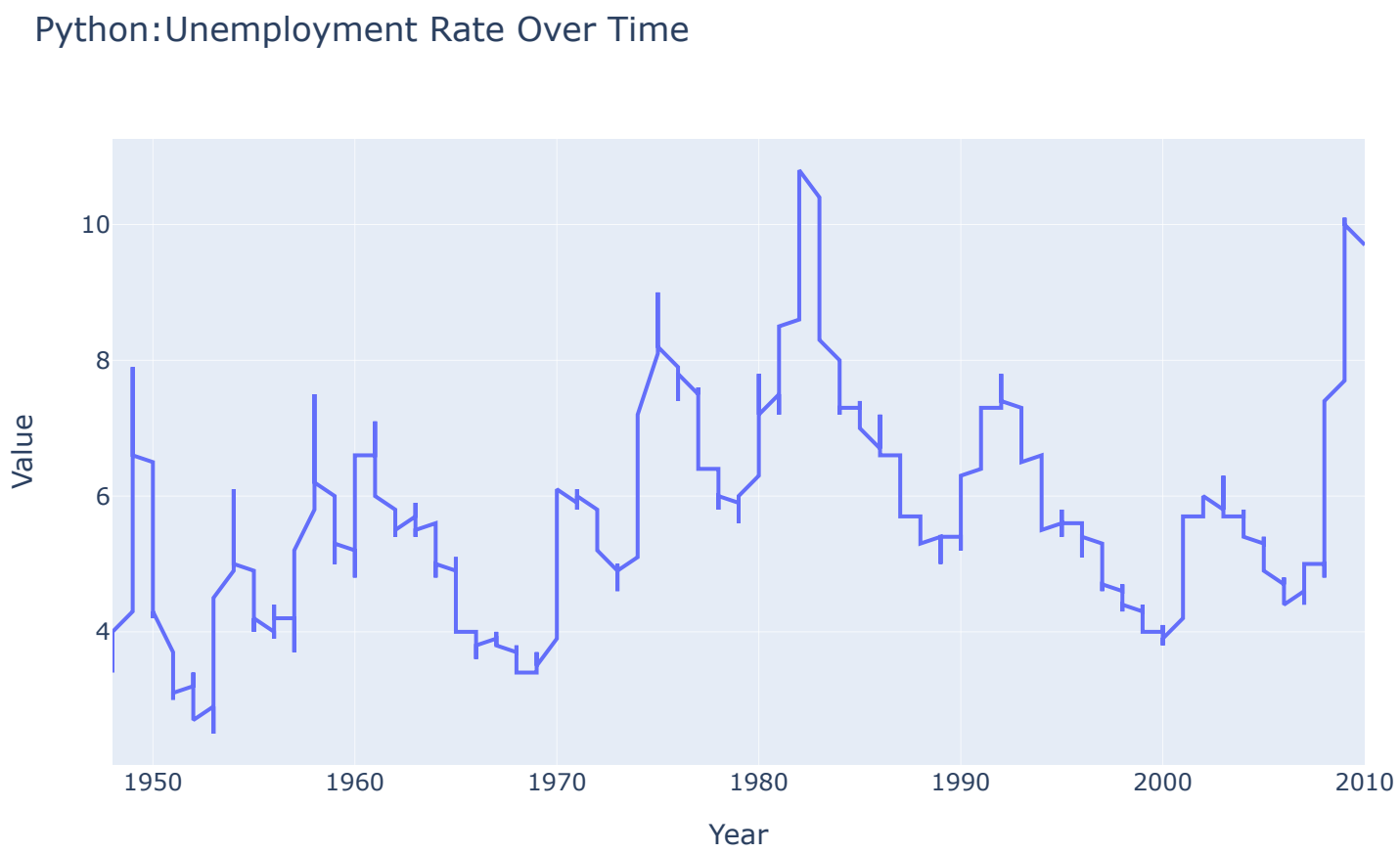
	Series id	Year	Period	Value
0	LNS14000000	1948	M01	3.4
1	LNS14000000	1948	M02	3.8
2	LNS14000000	1948	M03	4.0
3	LNS14000000	1948	M04	3.9
4	LNS14000000	1948	M05	3.5

In [31]:
```
# Tree Map
tree_map = px.treemap(data, path=['Period','Year'], values='Value', color='Value',
                      title='Python: Unemployment Rate Tree Map')
tree_map.update_layout(width=800, height=800)
tree_map.show()
```

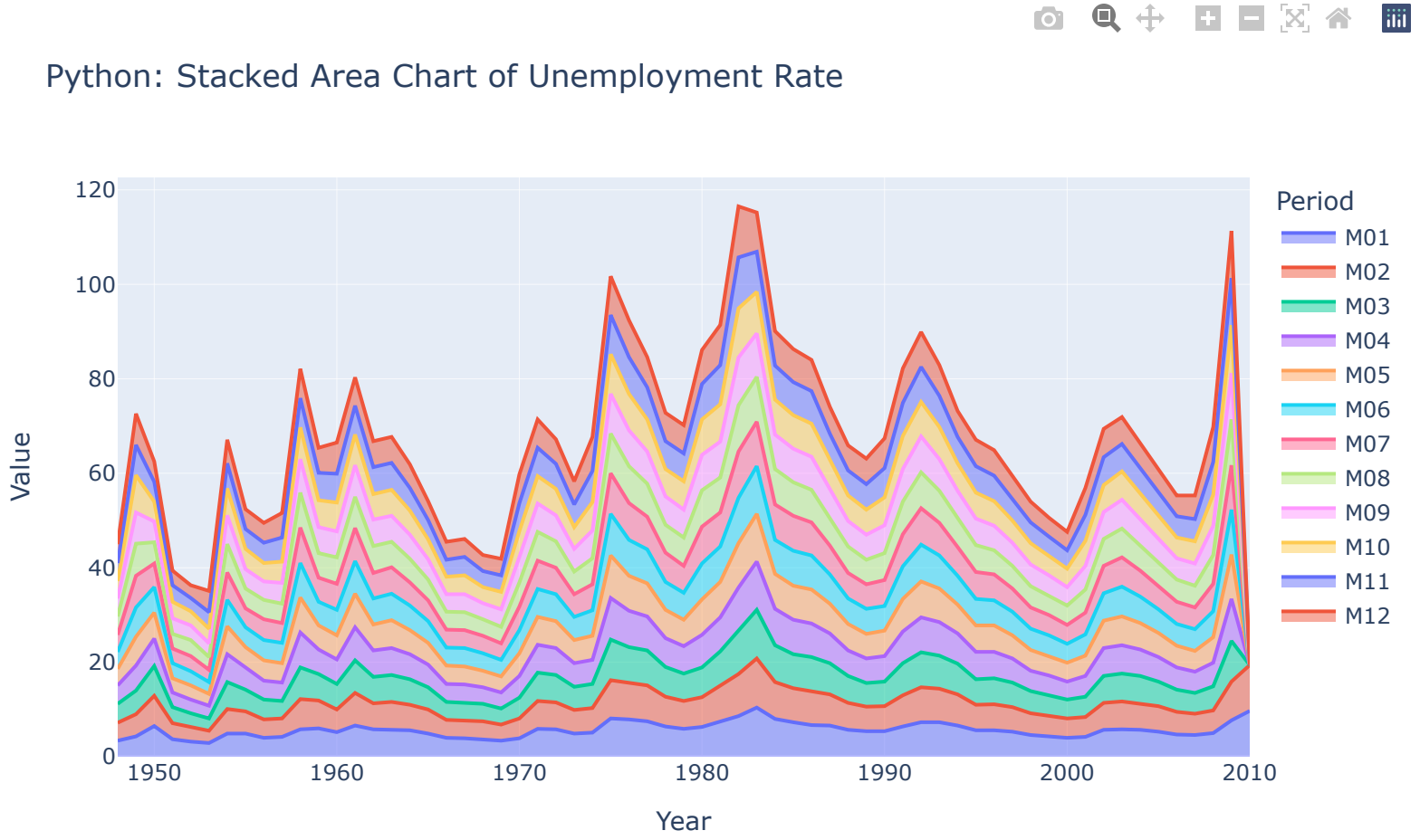
Python: Unemployment Rate Tree Map



In [33]:
```
# Area Chart
area_chart= px.line(data, x='Year', y='Value', title='Python:Unemployment Rate Over Time')
area_chart.update_layout(width=800, height=500)
area_chart.show()
```



In [34]:
```
# Stacked Area Chart
area_chart_stacked = px.area(data, x='Year', y='Value', color='Period',
                             title='Python: Stacked Area Chart of Unemployment Rate')
area_chart_stacked.update_layout(width=800, height=500)
area_chart_stacked.show()
```



R Charts Exercise 3.2

Gracie Inman

2024-01-21

```
# Load Libraries
library(ggplot2)
library(plotly)
```

```
##
## Attaching package: 'plotly'
```

```
## The following object is masked from 'package:ggplot2':
##
##     last_plot
```

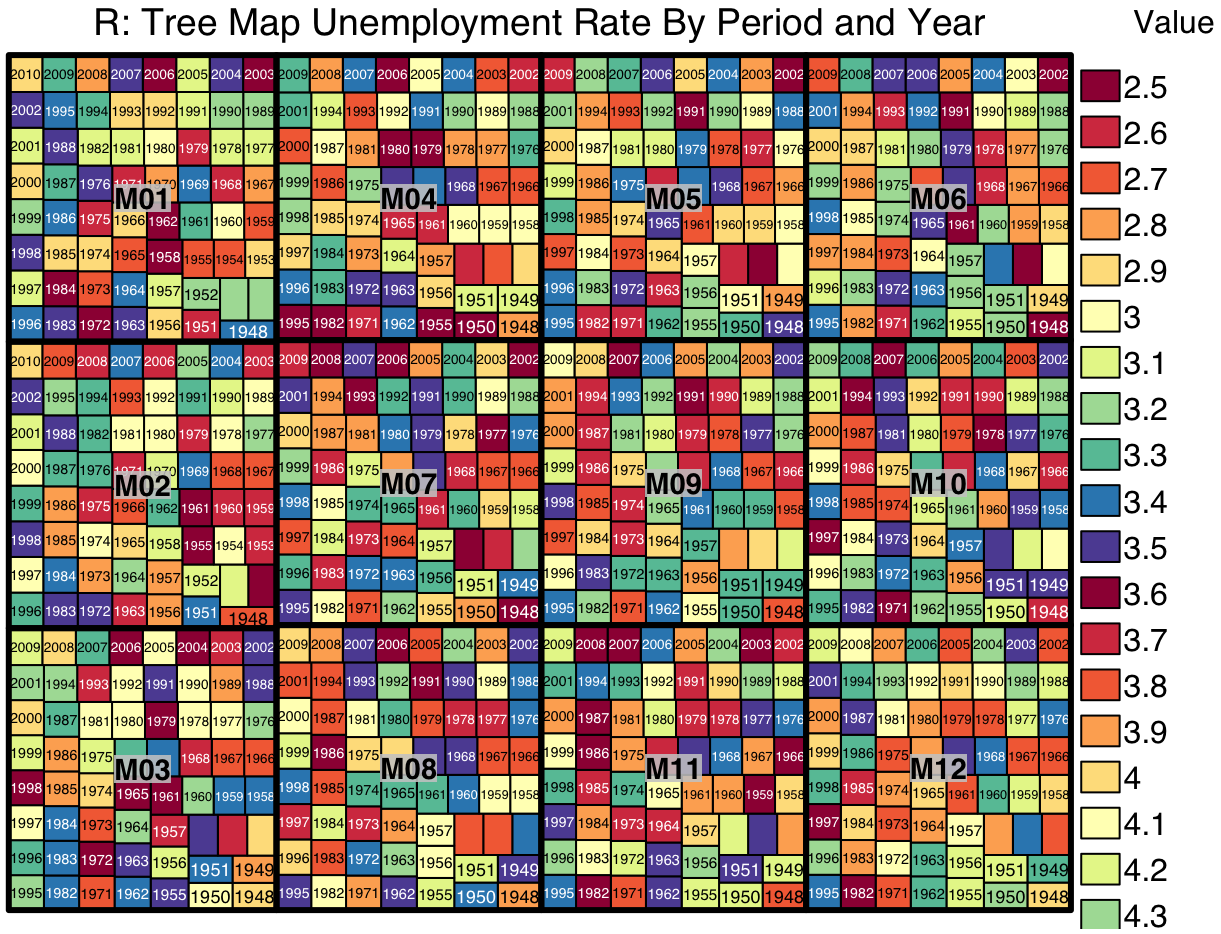
```
## The following object is masked from 'package:stats':
##
##     filter
```

```
## The following object is masked from 'package:graphics':
##
##     layout
```

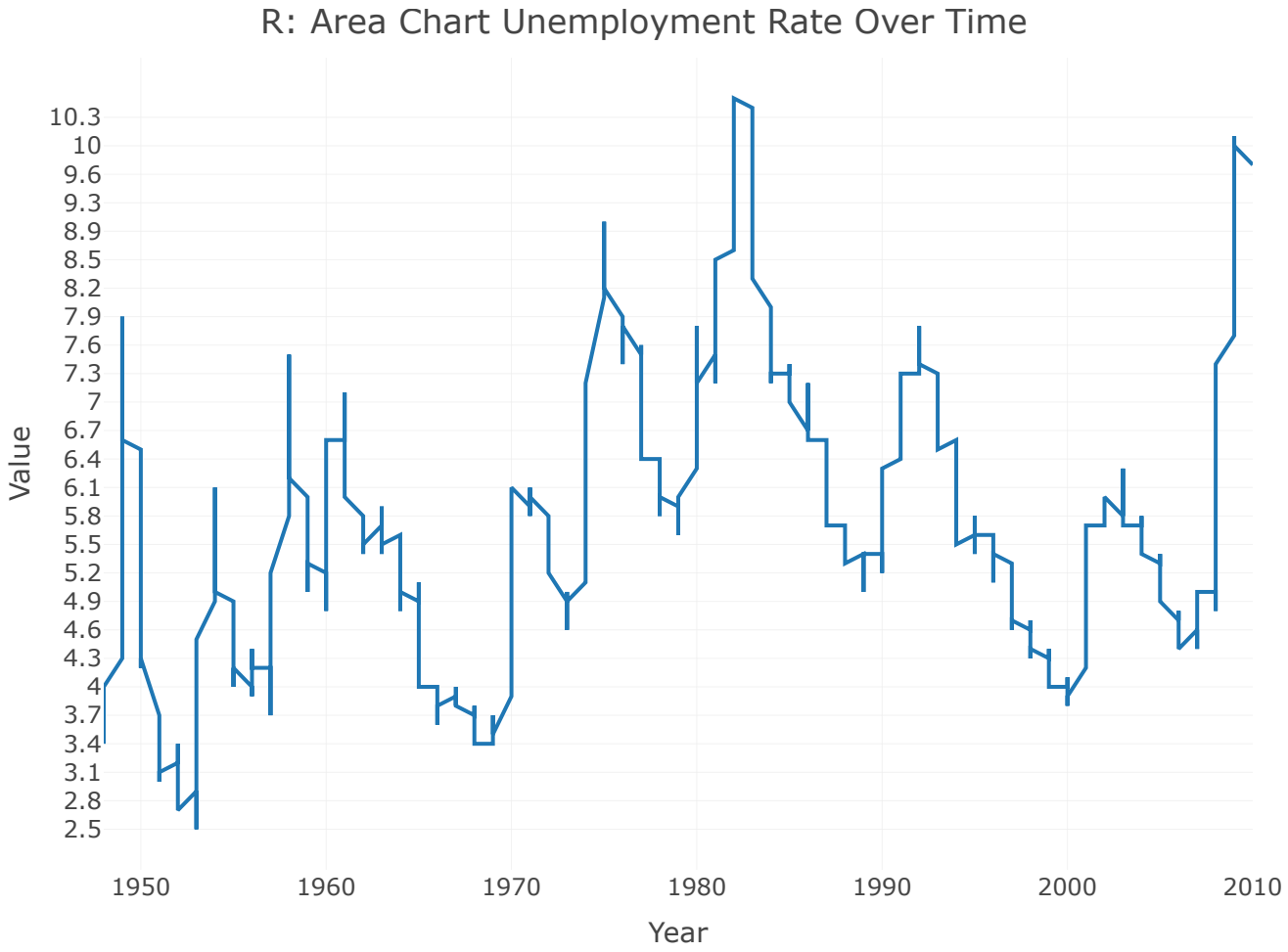
```
library(treemap)
```

```
# Load the dataset
data <- read.csv("/Users/gracieinman/Downloads/ex3-3/unemployement-rate-1948-2010.csv")
```

```
# Tree Map
data$Value <- as.factor(data$Value)
data$Year <- as.numeric(data$Year)
treemap(data,
        index=c("Period", "Year"),
        vSize = "Year",
        vColor = "Value",
        type="categorical",
        palette = "Spectral",
        title="R: Tree Map Unemployment Rate By Period and Year",
        fontsize.title = 14
        )
```



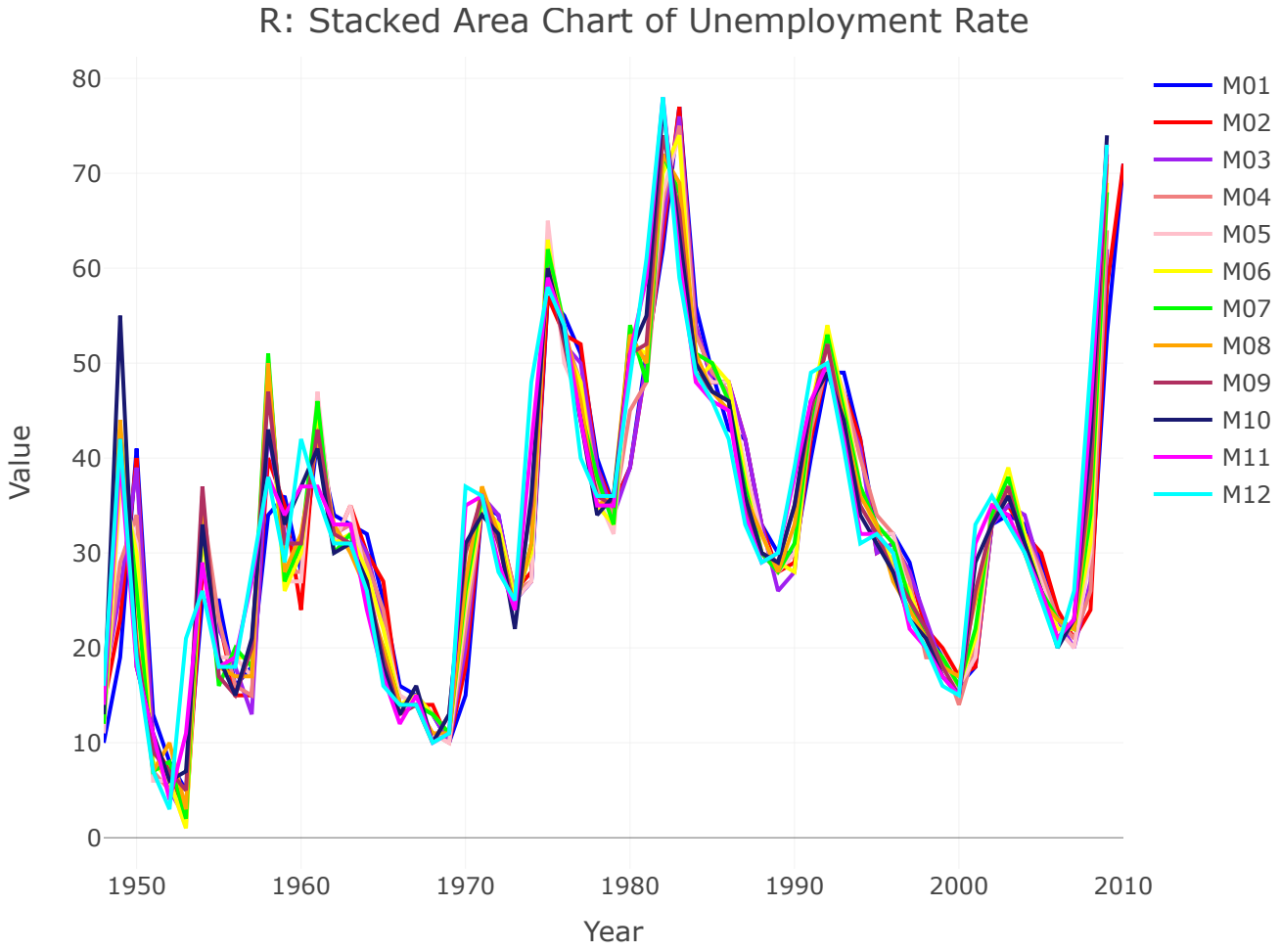
```
# Area Chart
area_chart <- plot_ly(data, x = ~Year, y = ~`Value`, type = 'scatter', mode = 'lines')
area_chart <- area_chart %>% layout(title = 'R: Area Chart Unemployment Rate Over Time')
area_chart
```



```
# Stacked Area Chart
data$Value <- as.numeric(data$Value)

custom_palette <- c("blue", "red", "purple", "lightcoral", "pink", "yellow", "green",
                    "orange","maroon", "midnightblue", "magenta", "cyan")

Area_stacked<- plot_ly(data, x = ~Year, y = ~`Value`, color = ~Period,
                       type = 'scatter', mode = 'lines',
                       colors = custom_palette[1:12])
Area_stacked <- Area_stacked %>% layout(
  title = 'R: Stacked Area Chart of Unemployment Rate')
Area_stacked
```



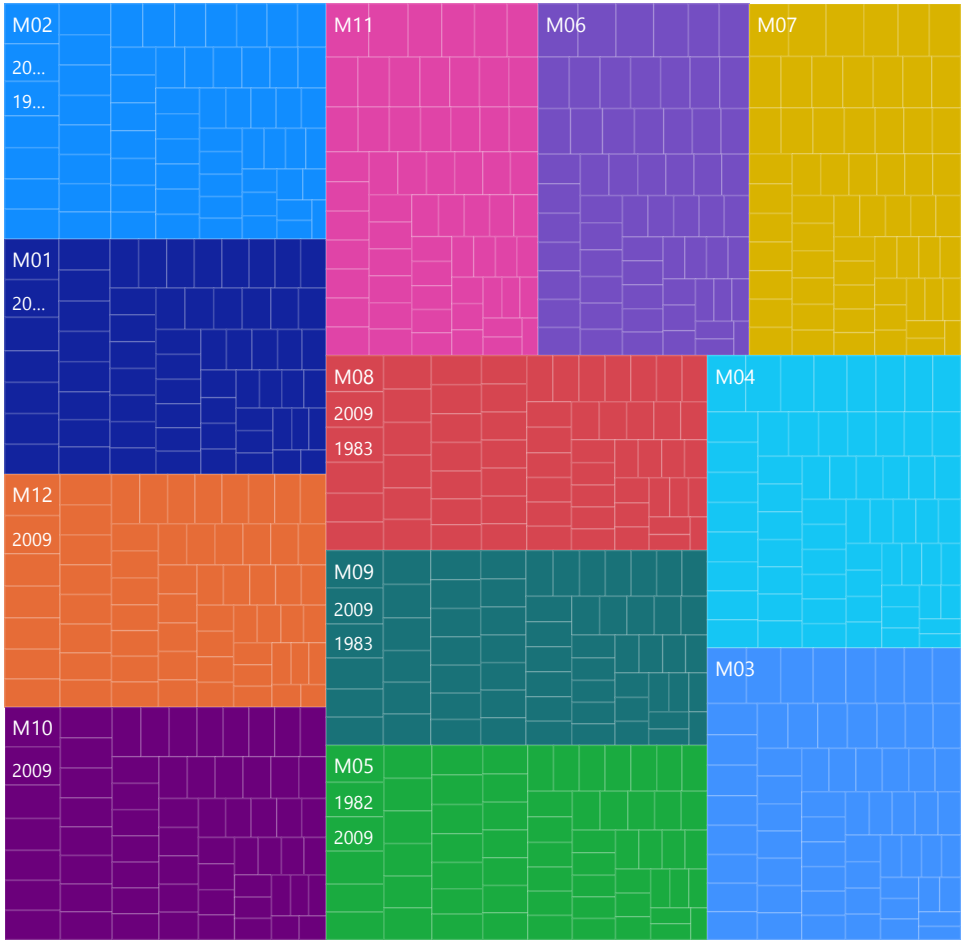
PowerBI Exercise 3.2

Unemployment Data

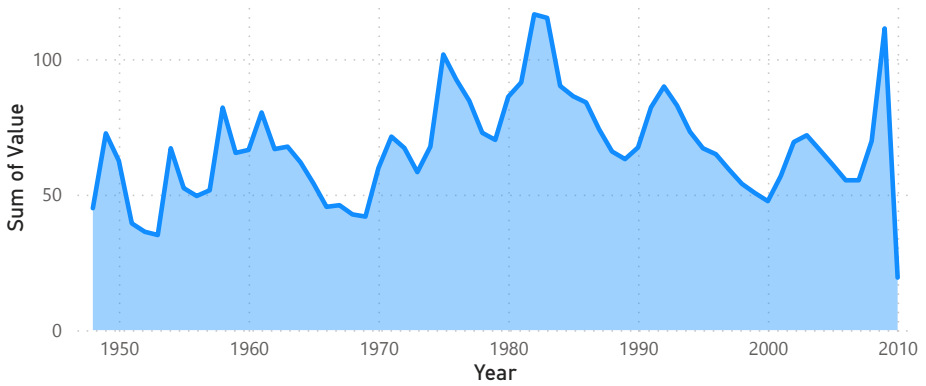
4,227.20
Sum of Value

746
Count of Unemployment...

Power BI: Tree Map by Period



Power BI: : Area Chart Value by Year



Power BI: Stacked Area Chart by Period