DSC640 Week 3-4 Assignment

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Charts in Python

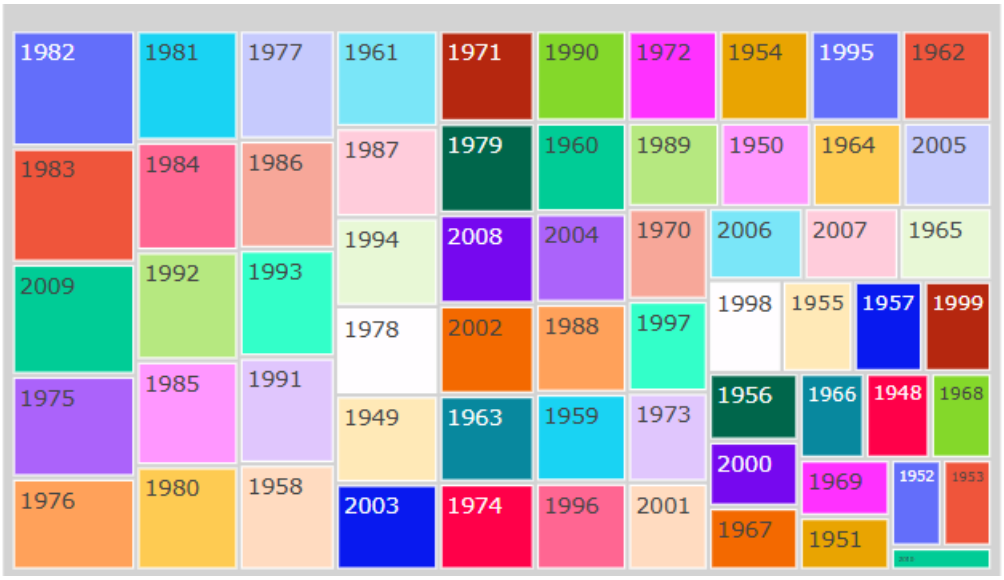
```
# Load the unemployment data csv file
unemplyment_rate__df = pd.read_csv('unemployement-rate-1948-2010.csv'

unemplyment_rate__df
```

	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
...	...	...	...	...
741	LNS14000000	2009	M10	10.1
742	LNS14000000	2009	M11	10.0
743	LNS14000000	2009	M12	10.0
744	LNS14000000	2010	M01	9.7
745	LNS14000000	2010	M02	9.7

746 rows × 4 columns

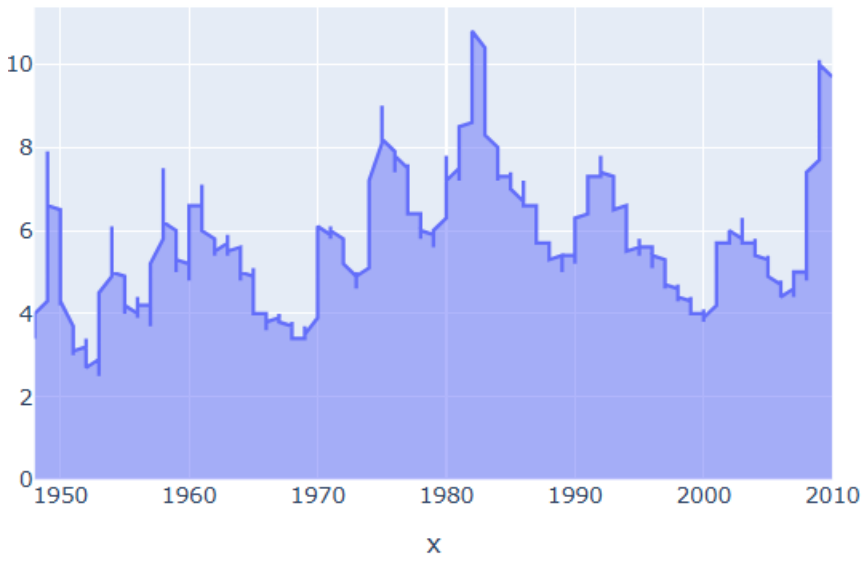
Python -Tree Map:

```
import plotly.express as px
fig = px.treemap(unemplyment_rate__df, path=['Year'],values='Value', width=600, height=400)

fig.update_traces(root_color="lightgrey")
fig.update_layout(margin = dict(t=50, l=25, r=25, b=25))
fig.show()
```



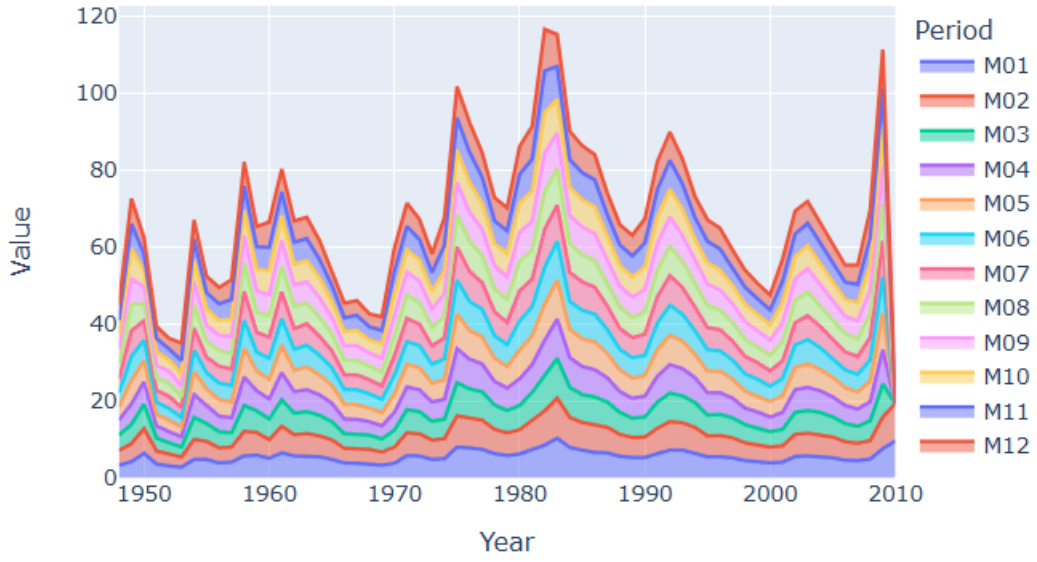
Python -Area chart

```
import plotly.express as px

fig = px.area(x = unemplyment_rate__df['Year'], y = unemplyment_rate__df['Value'], width=600, height=400)
fig.show()
```



Python -stacked Area Chart

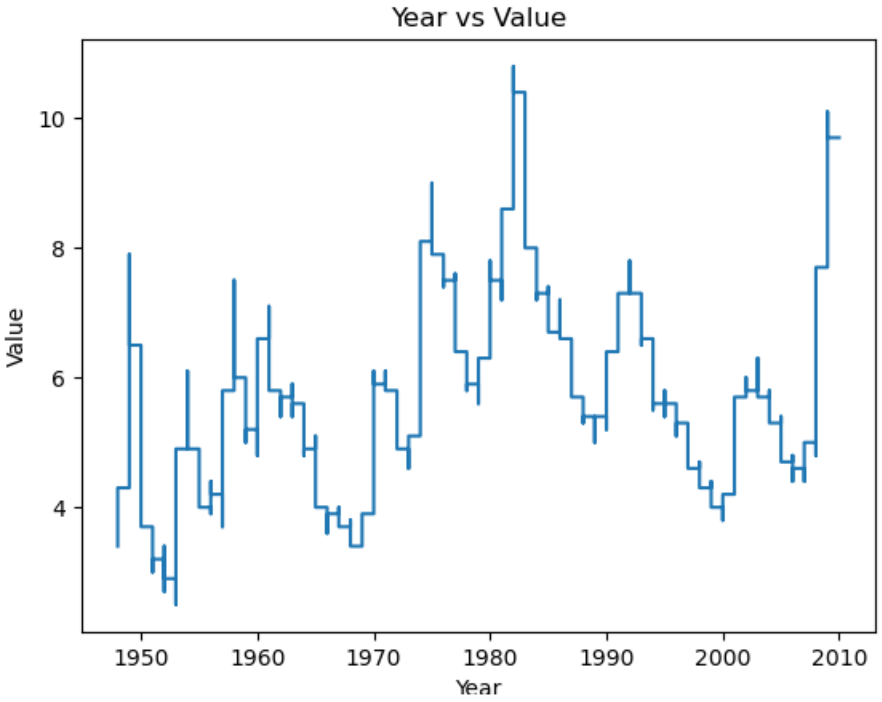
```
1  import plotly.express as px
2
3  fig = px.area(unemplyment_rate__df, x="Year", y="Value",
4               color="Period",
5               hover_data=['Value'], width=600, height=400)
6
7  fig.show()
8
```



Python -Step Chart

```
1  import matplotlib.pyplot as plt
2  %matplotlib inline
3
4  plt.step(unemplyment_rate__df.Year,unemplyment_rate__df.Value)
5  plt.xlabel("Year")
6  plt.ylabel("Value")
7  plt.title("Year vs Value")
```

```
Text(0.5, 1.0, 'Year vs Value')
```



Charts in R

```r
library("readxl")
unemployment_rate_df <- read.csv("unemployement-rate-1948-2010.csv")
unemployment_rate_df
```

Series.id <chr>	Year <int>	Period <chr>	Value <dbl>
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
LNS14000000	1948	M07	3.6
LNS14000000	1948	M08	3.9
LNS14000000	1948	M09	3.8
LNS14000000	1948	M10	3.7

1-10 of 746 rows

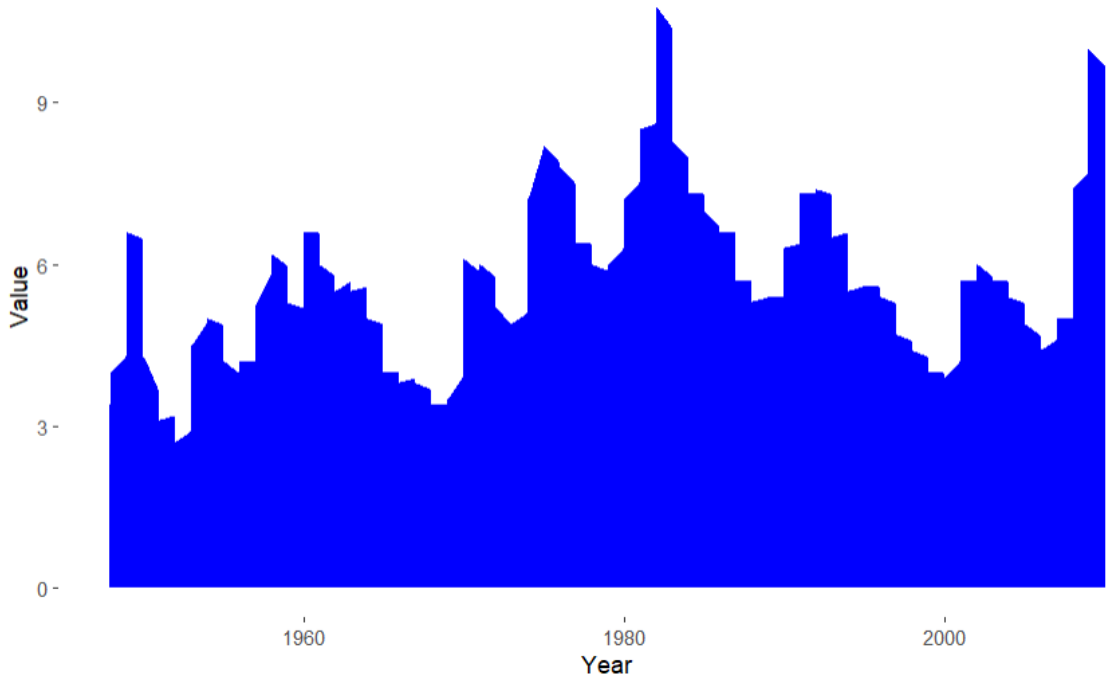
Previous 1 2 3 4 5 6 ... 75 Next

R – Tree Map:

```r
# Tree Map

# install.packages("treemapify")
library(treemapify)
# install.packages("ggplot2")
library(ggplot2)

ggplot(unemployment_rate_df, aes(area = Value, fill = Period, label = Value)) +
  geom_treemap() +
  geom_treemap_text()
```

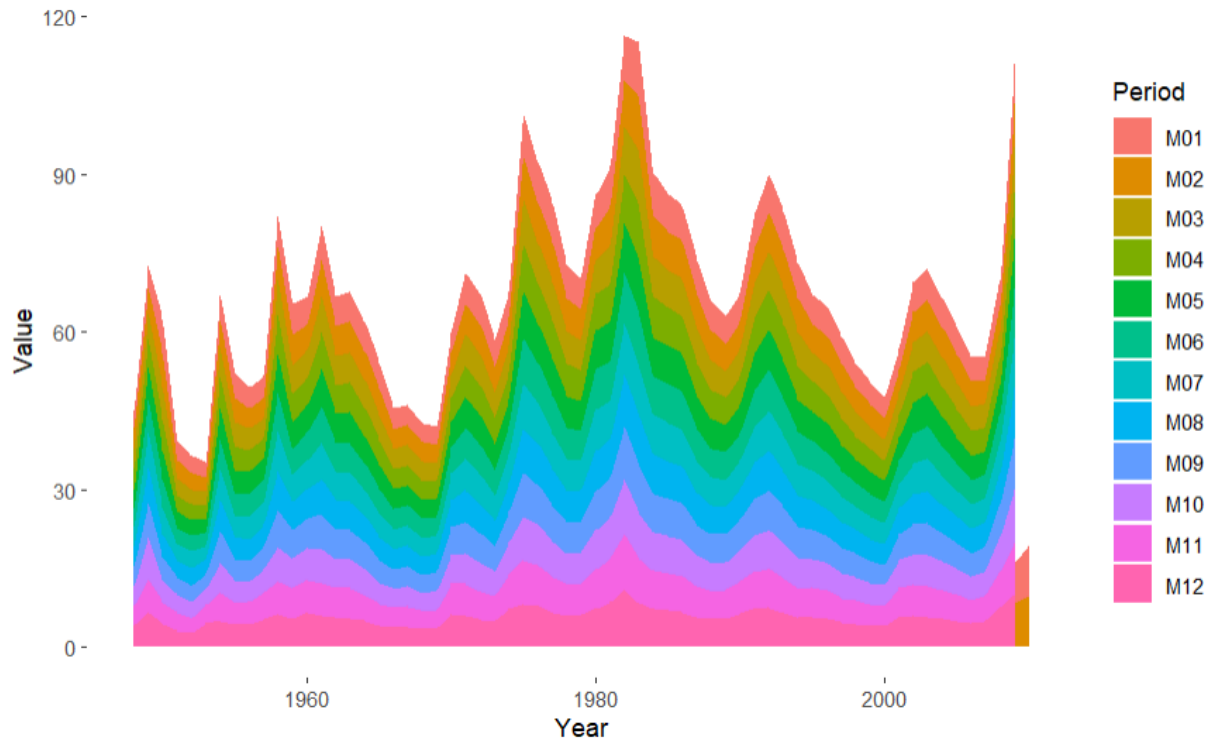
R - Area Chart:

```{r}
# Area Chart
# install.packages("ggplot2")
library(ggplot2)


ggplot(unemployment_rate_df, aes(x = Year, y = Value)) +
  geom_area(fill="blue") + theme(panel.background = element_blank())
```



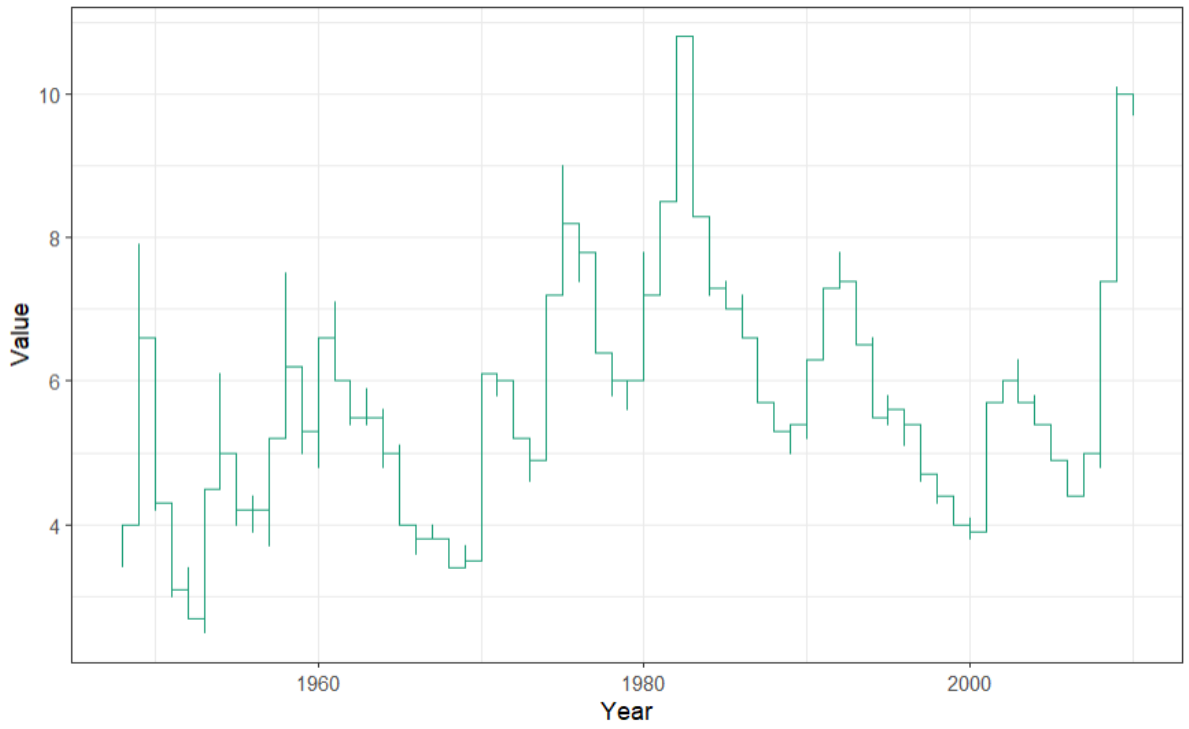
R - Stacked Area Chart:

```r
#Stacked Area chart

ggplot(unemployment_rate_df, aes(x=Year, y=Value, fill=Period)) +
    geom_area()+ theme(panel.background = element_blank())
```

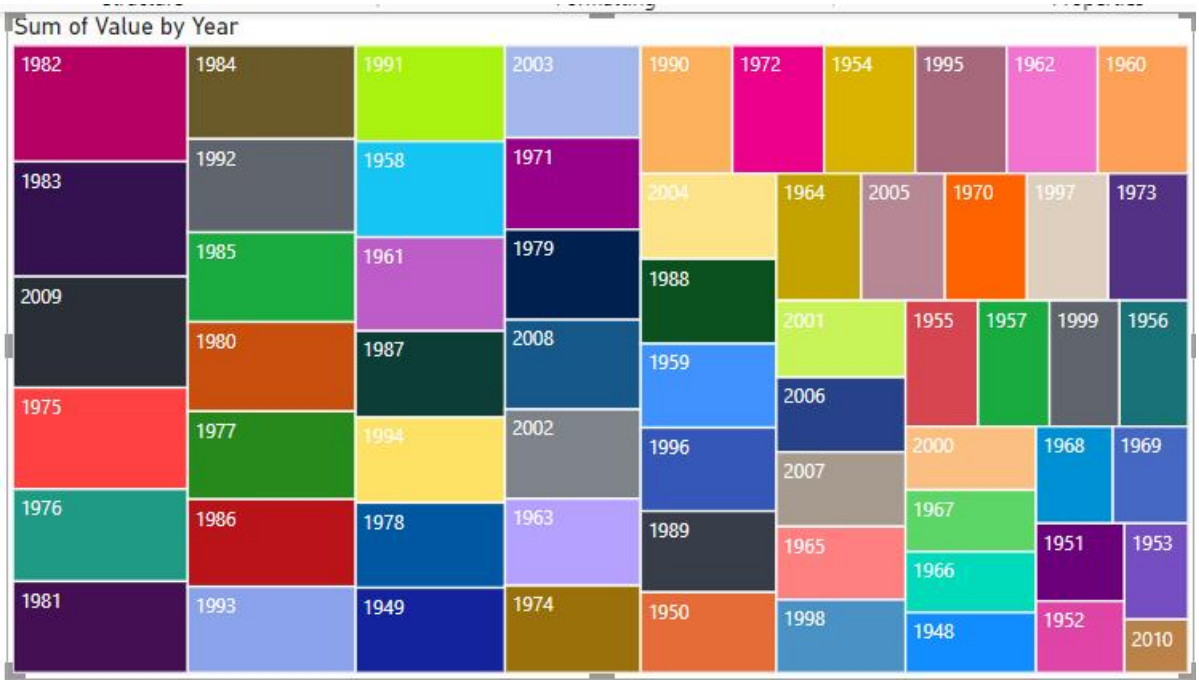


R – Step Chart:

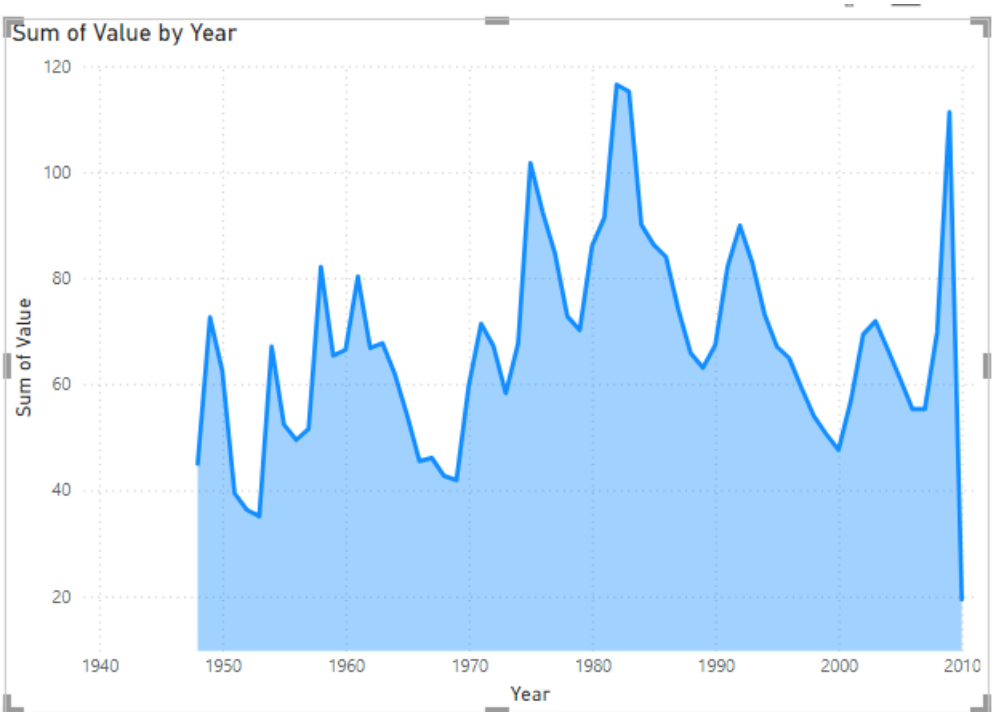
```r
# Step Chart
ggplot() +
  geom_step(data=unemployment_rate_df,mapping=aes(x=Year,y=Value),
            linetype=1,color='#1b9e77',alpha=1.5) + theme_bw()
```


Value
10
8
6
4
1960
1980
2000
Year

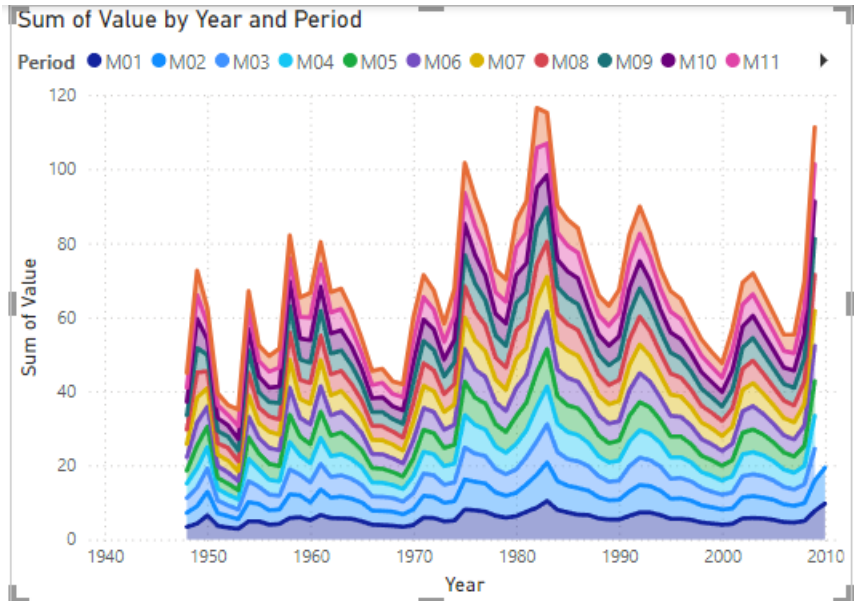
Power BI – Tree Map:



Power BI – Area chart:



Power BI – Stacked Area Chart:



Power BI – Step Chart: