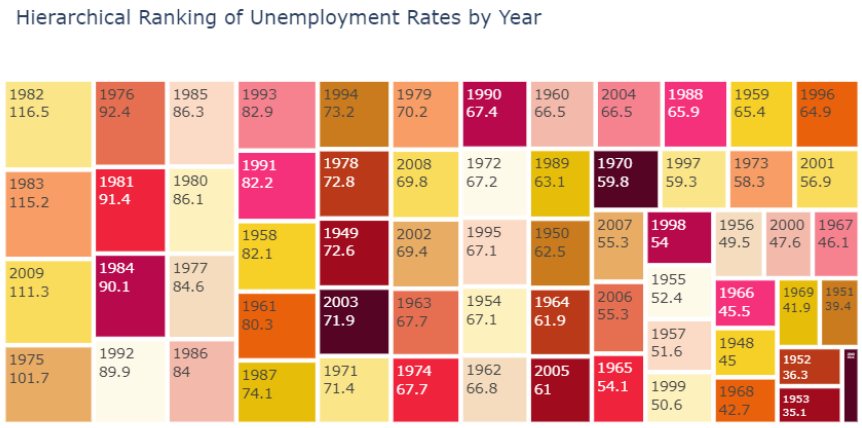
3.2 Exercises: Tree Maps, Area Charts and Stacked Area Charts

A. Python - Tree Maps

Tree Maps

In [18]:
```
colors=['#fae588','#f79d65','#f9dc5c','#e8ac65','#e76f51','#ef233c','#b7094c'] #color palette
```

In [22]:
```
import plotly.express as px
fig = px.treemap(unemployment_df, path=['Year'],values='Value', width=800, height=400)
fig.update_layout(
    treemapcolorway = colors, #defines the colors in the treemap
    margin = dict(t=50, l=25, r=25, b=25),
    title="Hierarchical Ranking of Unemployment Rates by Year")
fig.data[0].textinfo = 'label+text+value'
fig.show()
```

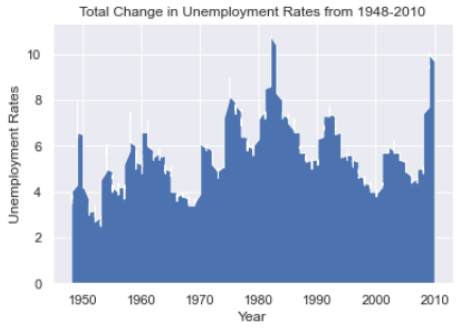


B. Python - Area Charts

Area Charts ¶

In [8]:
```
#set seaborn style
sns.set_theme()
```

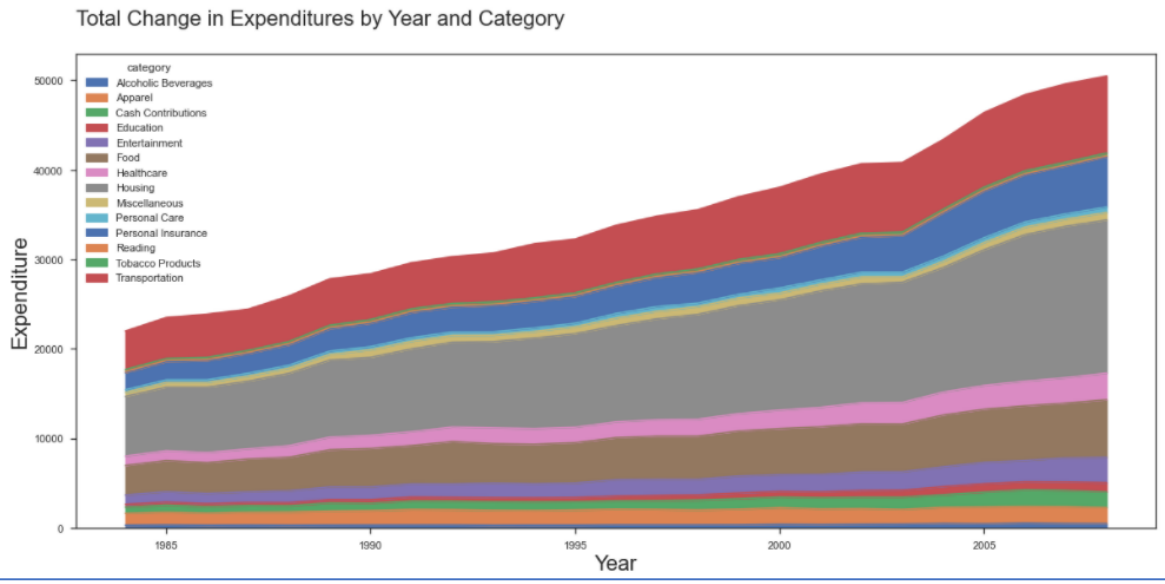
In [9]:
```
#create area chart
plt.stackplot(unemployment_df['Year'],unemployment_df['Value'])

#add axis labels
plt.xlabel('Year')
plt.ylabel('Unemployment Rates')

#add title
plt.title("Total Change in Unemployment Rates from 1948-2010")

#display area chart
plt.show()
```



C. Python - Stacked Area Charts

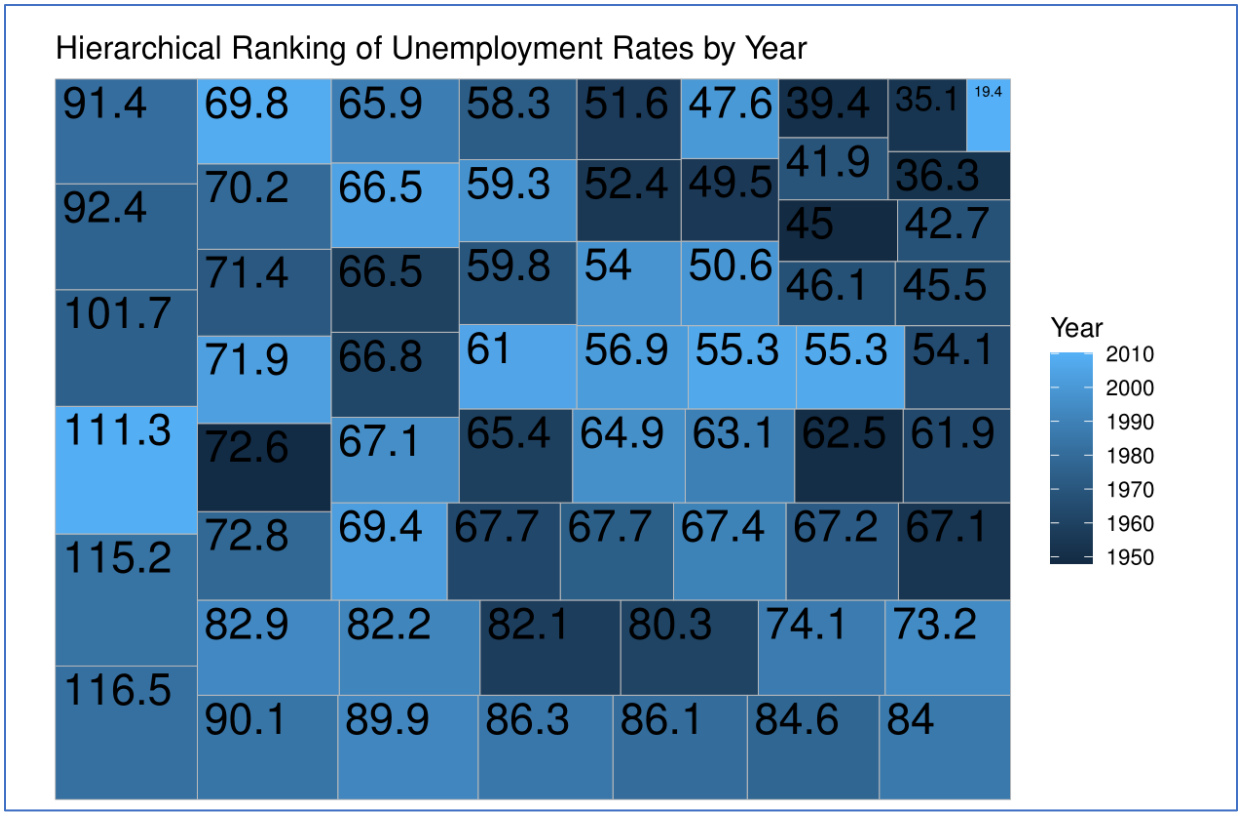
In [12]:
```
#set color theme for seaborn
plt.style.use('seaborn')
sns.set_style("white")
sns.set_theme(style = "ticks")

#proper labels and putting in area
df.plot.area(figsize = (20,9))
plt.title("Total Change in Expenditures by Year and Category\n", fontsize = 22, loc = 'left')
plt.ylabel("Expenditure", fontsize = 22)
plt.xlabel("Year", fontsize = 22)
```

Out[12]: Text(0.5, 0, 'Year')



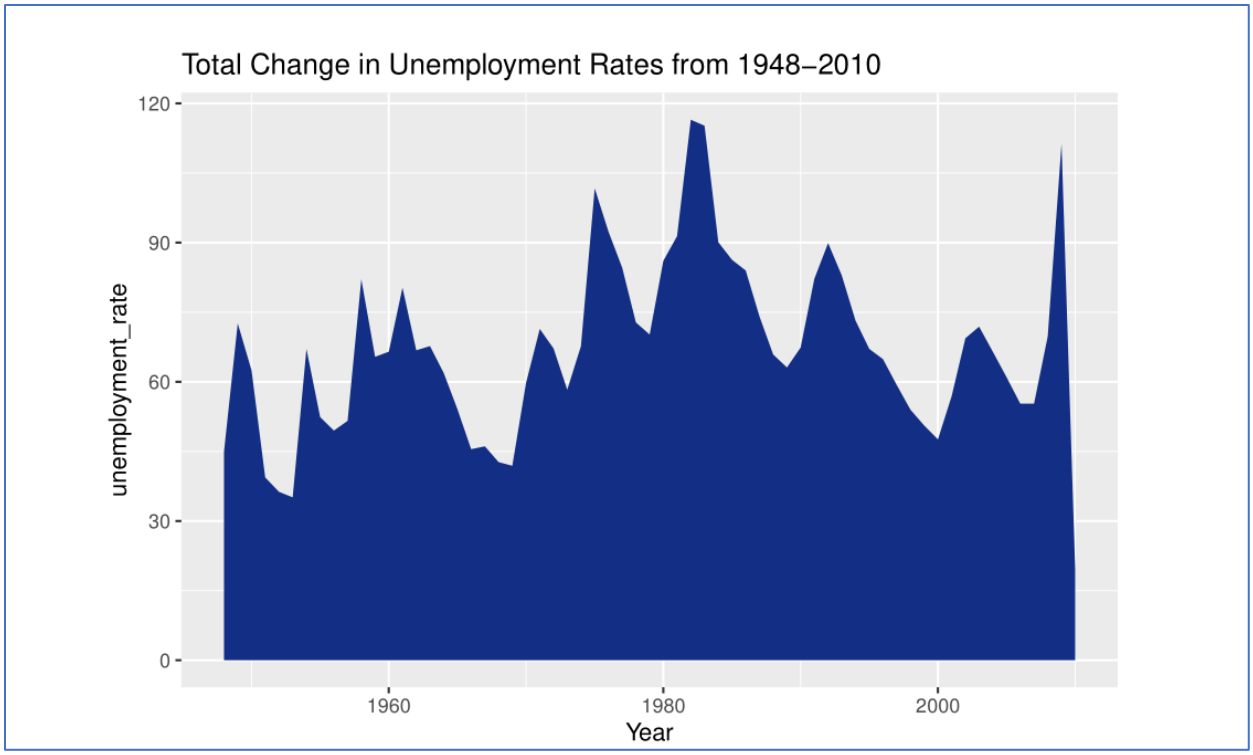
D. R - Tree Maps

```
#plotting tree map for total unemployment rates per year
#label on Year
ggplot(aggregated_df, aes(area =unemployment_rate, fill = Year,label=unemployment_rate)) +
  geom_treemap() + geom_treemap_text() + ggtitle("Hierarchical Ranking of Unemployment Rates by Year")
```



E. R - Area Charts

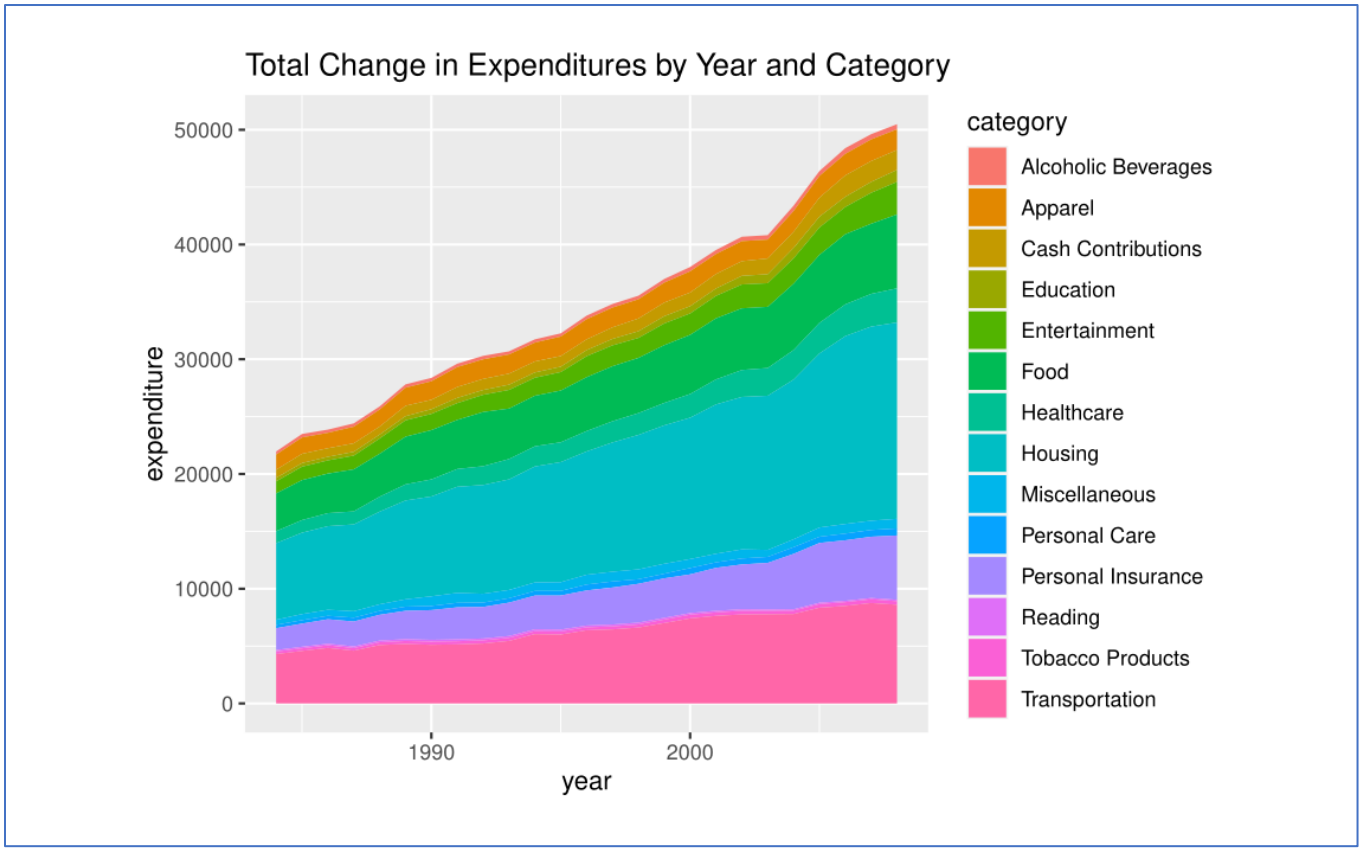
```
# Area Chart

#plotting the area chart for unemployment rate vs. year
#label on Year
ggplot(aggregated_df, aes(x =Year, y = unemployment_rate)) +geom_area(fill='#142F86',alpha=2) + ggtitle
```



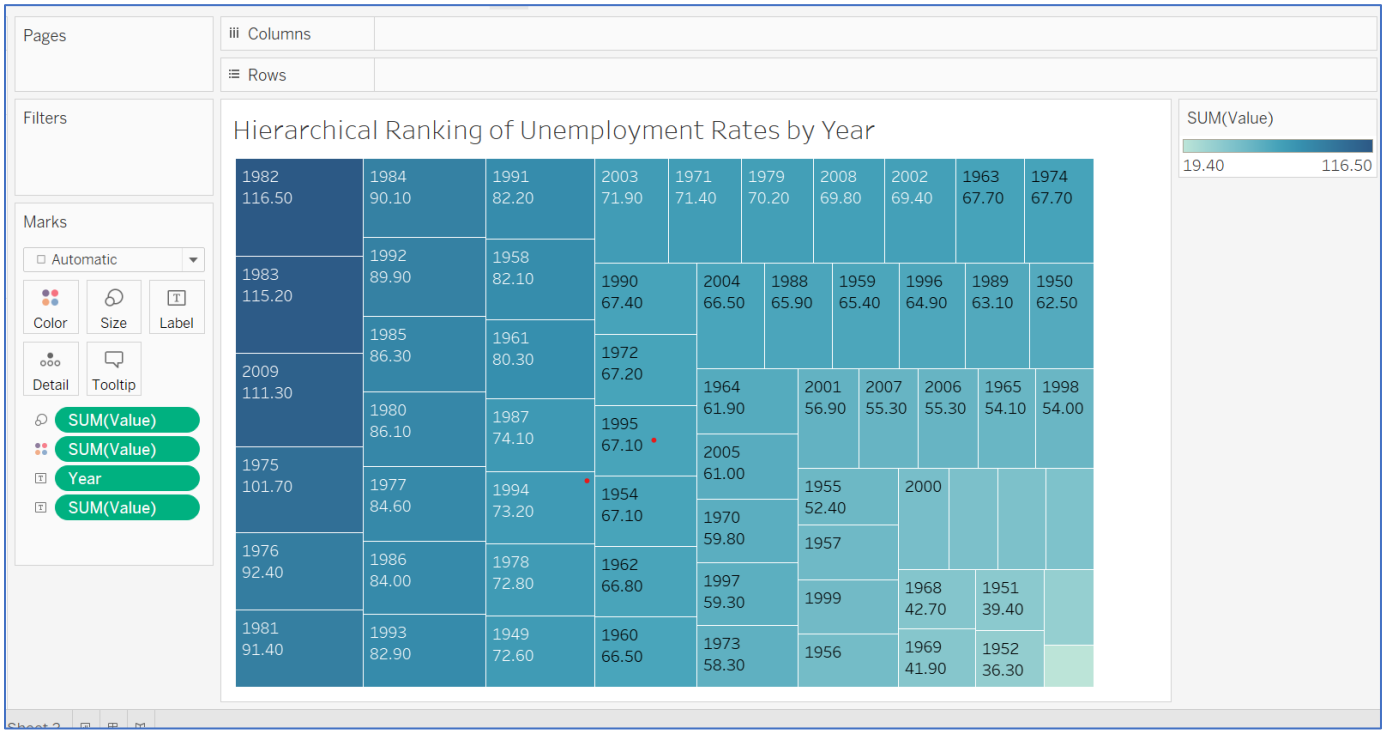
F. R - Stacked Area Charts

#Stacked Area Chart

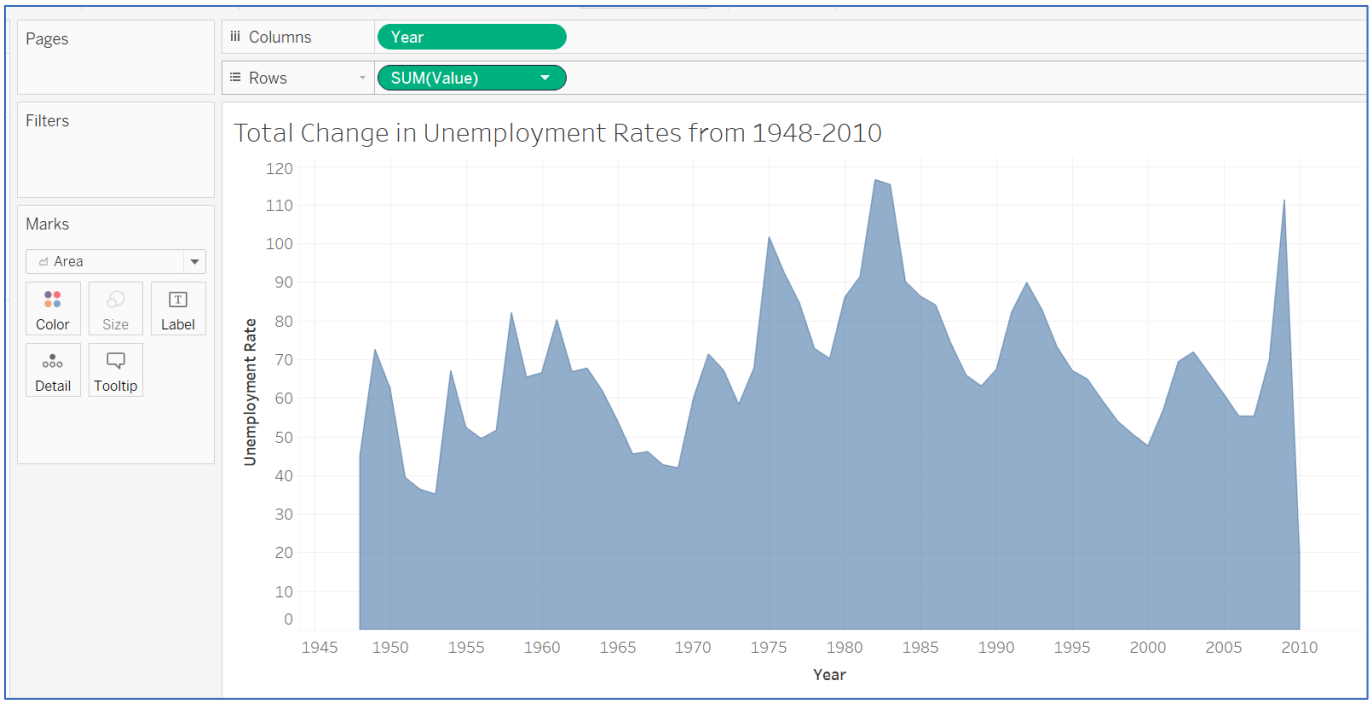
```
#plotting the area chart for expenditure vs. year by category
#label on Year
ggplot(expend, aes(x =year, y = expenditure,fill=category)) +geom_area() + ggtitle("Total Change in Exp
```



G. Tableau- Tree Maps



H. Tableau - Area Charts



I. Tableau - Stacked Area Charts