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In [1]: # Python Visuals
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In [1]: # Import libraries
import pandas as pd
import matplotlib.pyplot as plt
import squarify
import numpy as np
```

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In [2]: # Import Data
unemployment_df = pd.read_csv('unemployment-rate-1948-2010.csv')
unemployment_df.head()
```

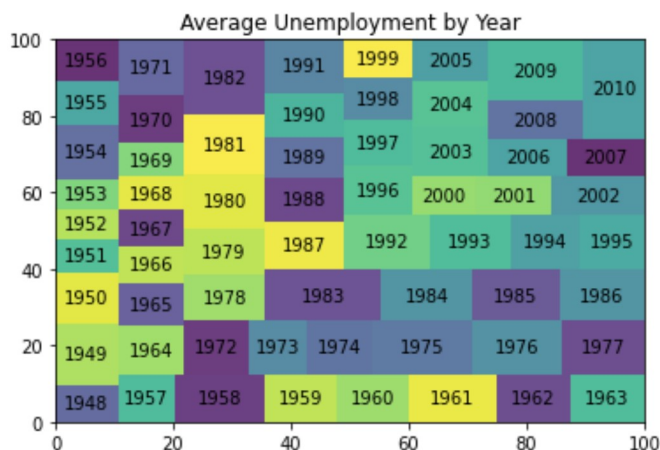
Out[2]:

	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

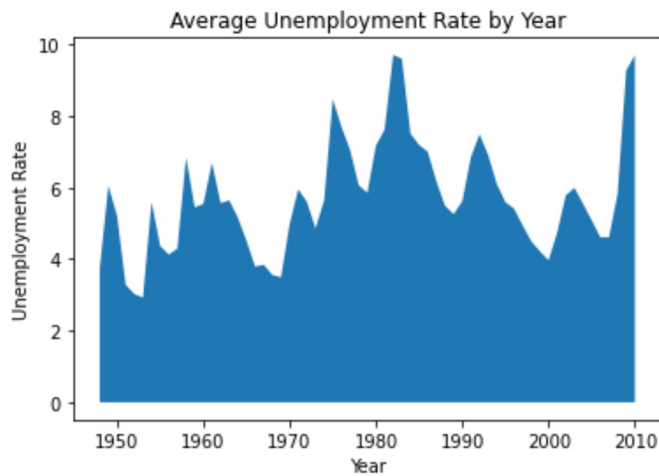
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In [3]: unemployment_year_avg = unemployment_df.groupby('Year').mean()
unemployment_year_avg['Year'] = range(1948, 2011)

unemployment_period_avg = unemployment_df.groupby('Period').mean()
unemployment_period_avg['Year'] = unemployment_period_avg['Year'].apply(np.ceil)
unemployment_period_avg.insert(1, "Period", ["M01", "M02", "M03", "M04", "M05", "M06", "M07", "M08", "M09", "M10", "M11", "M12"])
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In [4]: # Tree Map
squarify.plot(sizes=unemployment_year_avg['Value'], label=unemployment_year_avg['Year'], alpha=0.8)
plt.title('Average Unemployment by Year')
plt.show()
```

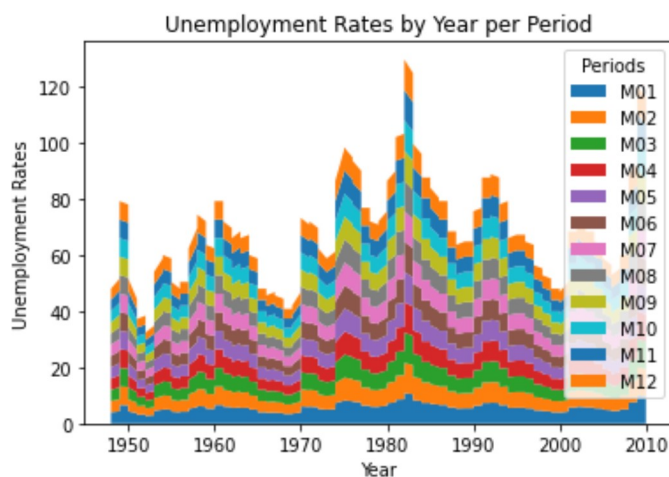


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In [5]: # Area Chart
plt.fill_between(unemployment_year_avg['Year'], unemployment_year_avg['Value'])
plt.xlabel('Year')
plt.ylabel('Unemployment Rate')
plt.title('Average Unemployment Rate by Year')
plt.show()
```



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In [6]: # Stacked Area Chart
plt.stackplot(unemployment_df['Year'], unemployment_df['Value'],unemployment_df['Va
lue'],unemployment_df['Value'],unemployment_df['Value'],unemployment_df['Value'],un
employment_df['Value'],unemployment_df['Value'],unemployment_df['Value'],unemployme
nt_df['Value'],unemployment_df['Value'],unemployment_df['Value'],unemployment_df['V
alue'], labels=unemployment_df['Period'])
plt.title('Unemployment Rates by Year per Period')
plt.xlabel('Year')
plt.ylabel('Unemployment Rates')
plt.legend(title='Periods')
```

Out[6]: <matplotlib.legend.Legend at 0x18f86806a08>



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In [7]: # Step Chart
plt.step(unemployment_year_avg['Year'], unemployment_year_avg['Value'])
plt.xlabel('Year')
plt.ylabel('Unemployment Rate')
plt.title('Average Unemployment Rate by Year')
plt.plot()
plt.show()
```

