Power Bi Visuals

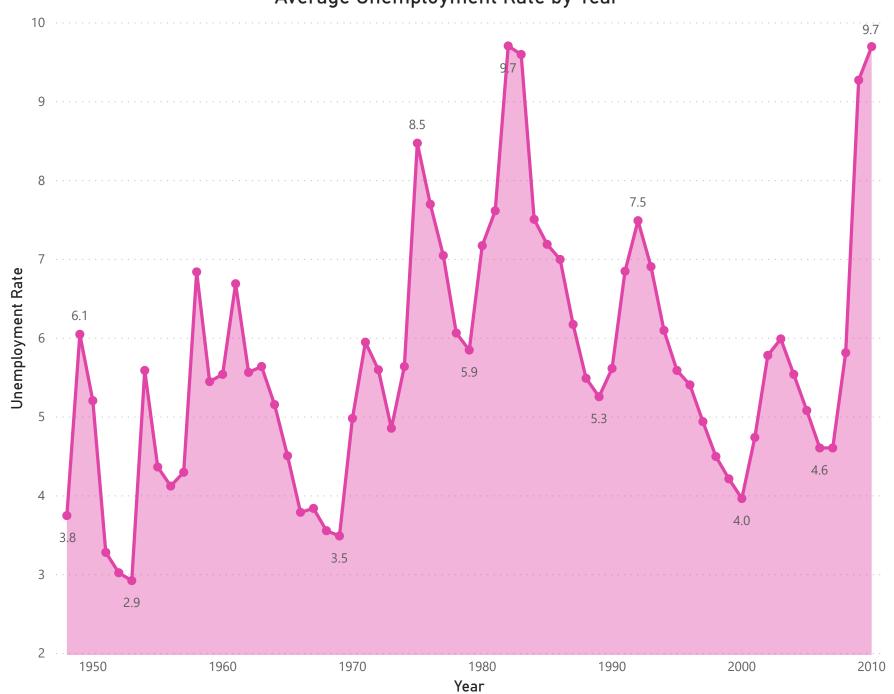
Tree Map

Average Unemployment Rate by Year

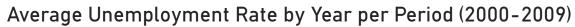


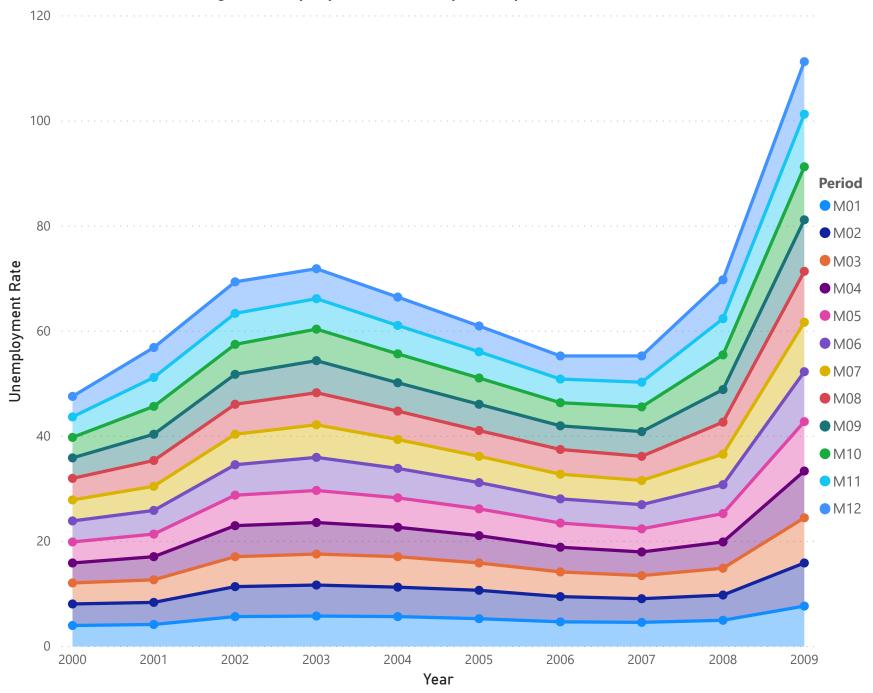
Area Chart



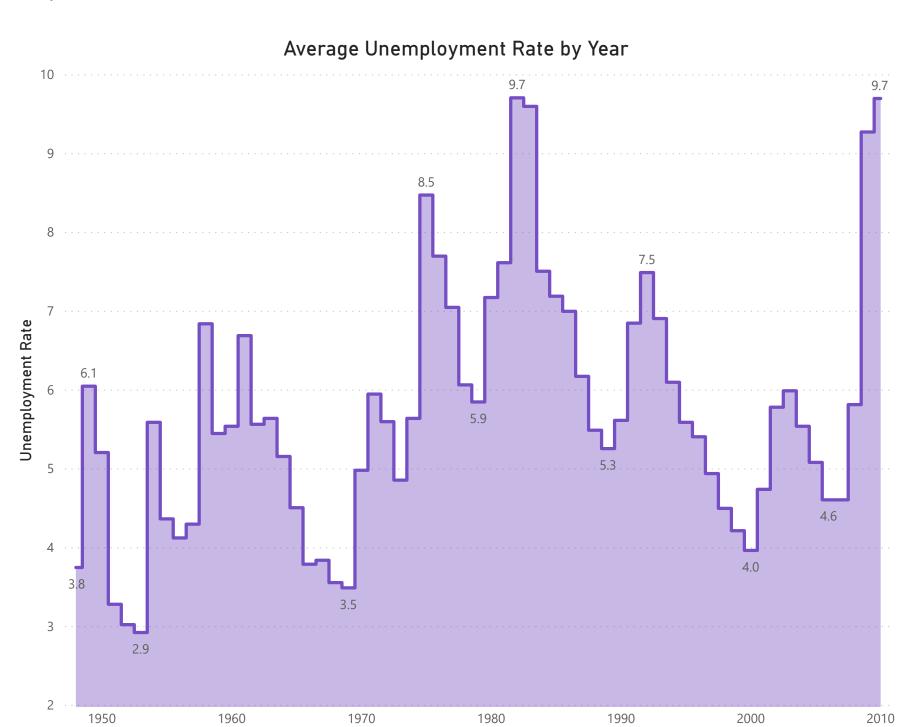


Stacked Area Chart





Step Chart



Year

2.2 Charts - R Visuals

Gabriel Valenzuela 6/21/2020

R Visuals

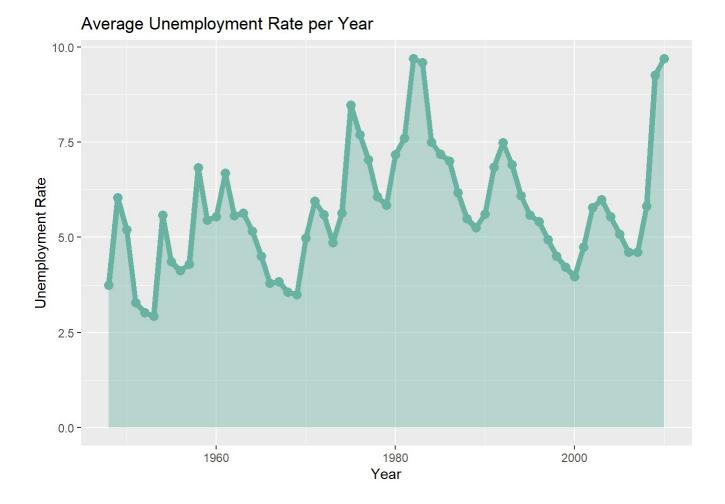
Tree Map

Unemployment Rate by Year

1982	1981	1986	1994	1978	1949	2003	19	971	1979
1000	1984	1993	2008	1972	1954	1995	19	62	1960
1983	1992	1991	2002	2004	1950	1964	20	005	1970
2009				1988	1997	2007			1000
	4005	1958	1963				1965	1998	1955
	1985			1959	1973	1957 2	2000	4067	1000
1975	1980	1961	1974				2000	1967	1966
				1996	2001	1999	1948	1969	1951
1976	1977	1987	1990	1989	2006	1956	1968	1952	1953 2010

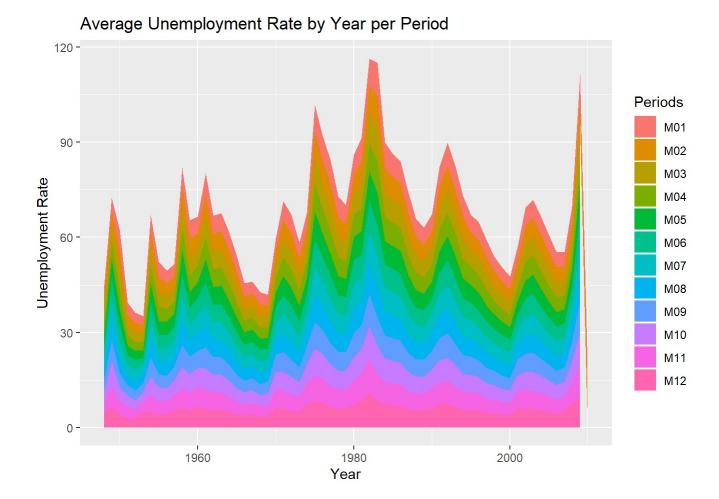
Area Chart

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Stacked Area Chart

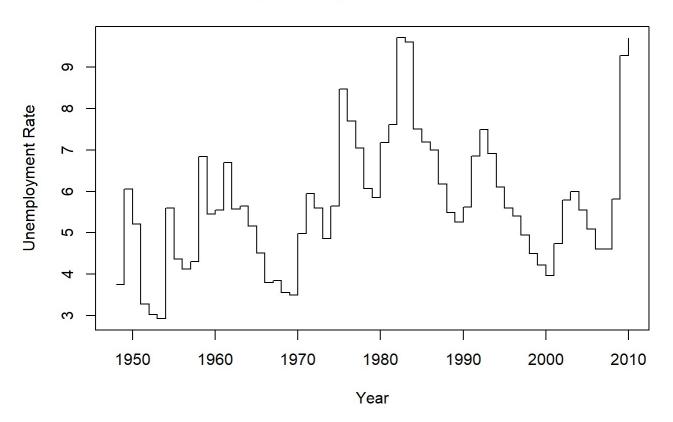
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Step Chart

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Average Unemployment Rate by Year



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0

20

40

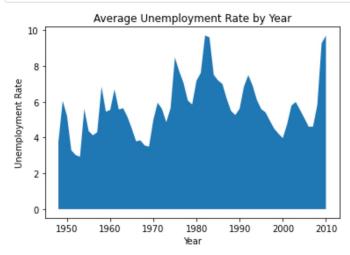
60

```
In [1]: # Python Visuals
In [1]: # Import libraries
         import pandas as pd
         import matplotlib.pyplot as plt
         import squarify
         import numpy as np
In [2]: # Import Data
         unemployment_df = pd.read csv('unemployement-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
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"])
In [4]: # Tree Map
         squarify.plot(sizes=unemployment_year_avg['Value'], label=unemployment_year_avg['Ye
         ar'], alpha=0.8)
         plt.title('Average Unemployment by Year')
         plt.show()
                       Average Unemployment by Year
          100
                                     1999
                   1971
                               1991
                                          2005
                                                 2009
                         1982
                                                       2010
                                     1998
              1955
                                          2004
                               1990
           80
                                                 2008
                                     1997
                         1981
              1954
                               1989
                                          2003
                                                2006
                   1969
                   1968
                                     1996
           60
              1953
                                          2000
                                               2001
                                                      2002
                               1988
                         1980
              1952
                   1967
                                     1992
                                                 1994 1995
                                            1993
                               1987
                         1979
              1951
                   1966
           40
                                        1984
                                               1985
                                                      1986
                         1978
              1950
                   1965
                        1972 1973 1974
                                        1975
                                                1976
                                                      1977
           20
              1949
                   1964
                         1958
                               1959
                                    1960
                                          1961
                                                      1963
              1948
                   1957
```

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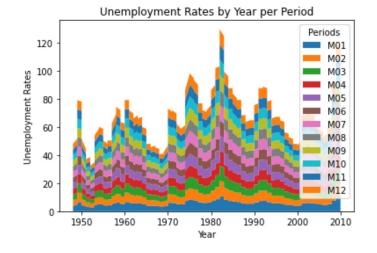
100

```
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()
```



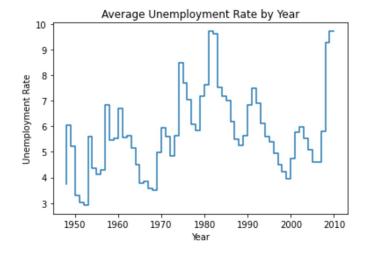
```
In [6]: # Stacked Area Chart
    plt.stackplot(unemployment_df['Year'], unemployment_df['Value'], unemployment_df['Va
```

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()
```



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