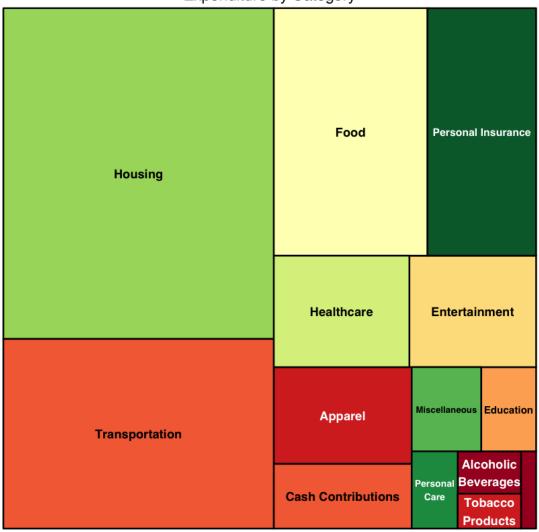
R Plots

```
In [1]: # Import required packages
         library('magrittr')
        library("ggplot2")
library("dplyr")
         Registered S3 methods overwritten by 'ggplot2':
          method
                           from
           [.quosures
                           rlang
           c.quosures
                           rlang
           print.quosures rlang
         Attaching package: 'dplyr'
         The following objects are masked from 'package:stats':
             filter, lag
         The following objects are masked from 'package:base':
             intersect, setdiff, setequal, union
In [2]: file = paste(getwd(), '/expenditures.txt', sep = '')
df1 = read.table(file, header = TRUE, sep = '\t', dec = '.', fill = TRUE)
In [3]: df = read.csv("unemployement-rate-1948-2010.csv", sep=',', stringsAsFactors = FALSE) %>%
             dplyr::mutate(Value = as.numeric(Value)) %>%
             as.data.frame()
In [4]: print(head(df))
             Series.id Year Period Value
         1 LNS14000000 1948 M01 3.4
2 LNS14000000 1948 M02 3.8
         2 LNS14000000 1948
         3 LNS14000000 1948
                                M03 4.0
M04 3.9
         4 LNS14000000 1948
                                      3.5
         5 LNS14000000 1948 M05
         6 LNS14000000 1948 M06 3.6
```

R: Tree Map

Expenditure by Category

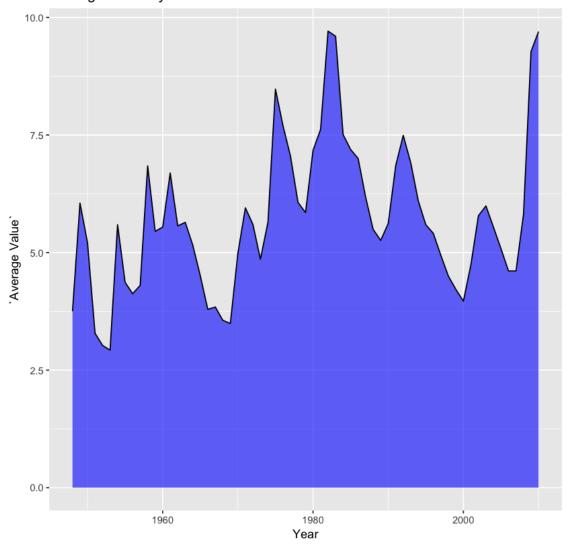


R: Area Plot

| Year | Average Value |
|------|---------------|
| 1948 | 3.750000 |
| 1949 | 6.050000 |
| 1950 | 5.208333 |
| 1951 | 3.283333 |
| 1952 | 3.025000 |
| 1953 | 2.925000 |

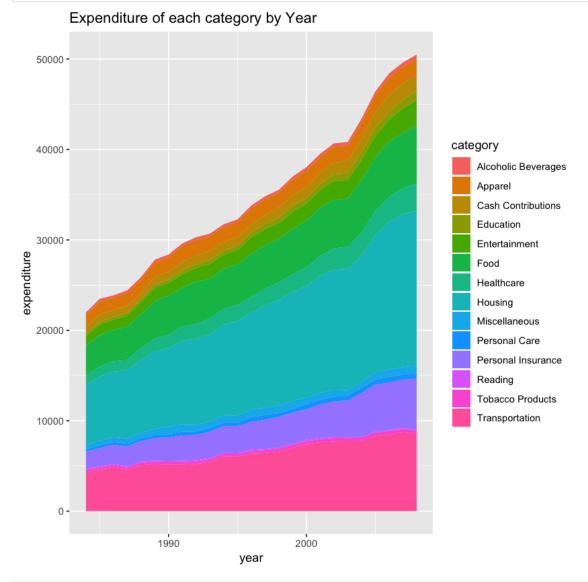
```
In [7]: ggplot2::ggplot(avg_unemployement, ggplot2::aes(x=Year , y=`Average Value`)) +
    ggplot2::geom_area( fill='blue', alpha=.6) +
    ggplot2::geom_line() +
    ggplot2::ggtitle('Average Value by Year')
```

Average Value by Year



R: Stacked Area Plot

In [8]: ggplot2::ggplot(df1, ggplot2::aes(x=year, y=expenditure, fill=category)) + ggplot2::geom_area() + ggplot2::ggtitle('Ex



In []: